TEXTILE WORLD

A McGraw-Hill Publication ..... APRIL • 1954

Guide to Exhibitors

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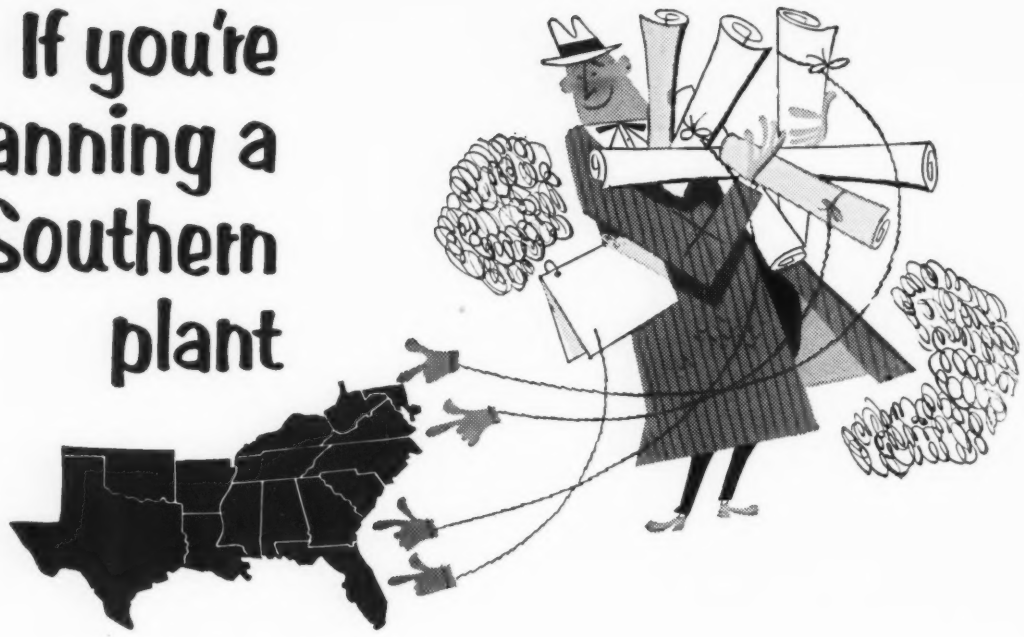
If you're planning a Southern plant



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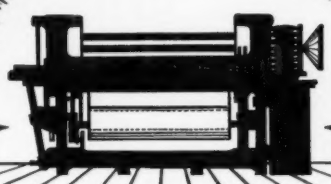

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Models XL, E, XD, XP, 3 X2's

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AMERICAN ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954

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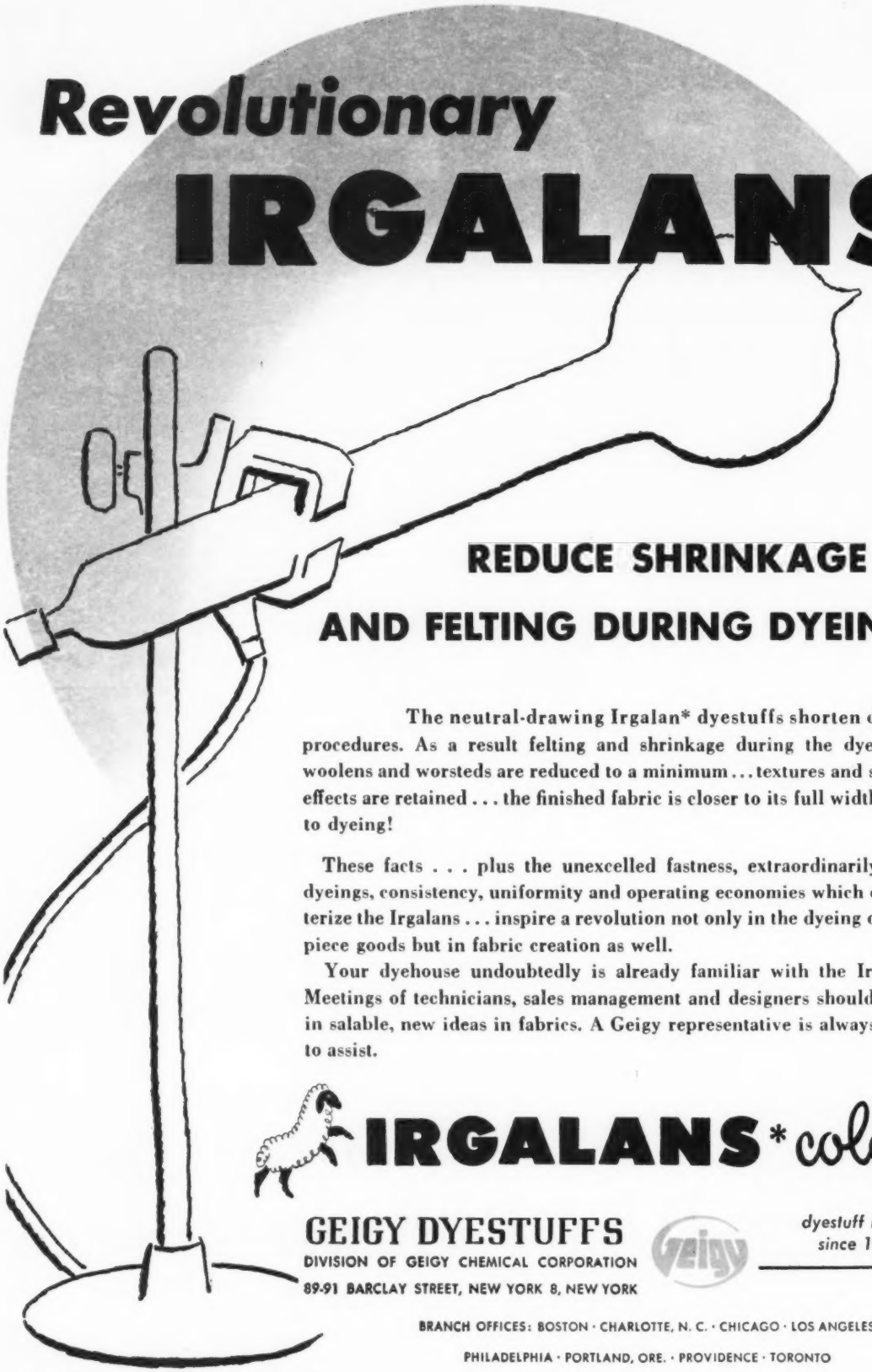

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THE Long-Range VIEW

Why Cut Off Our Own Noses?

- **40% of consumer spending is optional**
- **Last fall, consumers thought it was "a good time to buy"**
- **Did textile men themselves create the year-end slump?**

It is a matter of record that 1953 started out as a good year for the textile industry; but shortly after midyear, business began to bog down, and the industry wound up being an also-ran during the last months of the year.

No one will pretend to know the complete cause of the slump in business. Anyone who has an ax to grind or a bill of goods to sell can put up a pretty good argument to support his case. Our case is that textile men themselves had a big hand in cutting off their own noses.

Let's Look at Textile Consumers . . .

It is well known that consumer spending is the backbone of the textile economy. Mills produce and sell goods only if consumers choose to buy. Textile machinery manufacturers and suppliers produce and sell goods to mills only if consumers place money in the hands of mills.

(Government procurement of textiles is such a trifle that it's little short of useless to talk seriously about it. A few things like housewives sewing up a torn bedsheet instead of buying a new one, making a towel last a few extra launderings, buying a skirt instead of a suit, etc. will quickly wash out far more textile business than government buying amounts to.)

One of the most important characteristics of textile consumers is the fact that they can buy or not buy at any given time. In a study made by the McGraw-Hill economics department, it was pointed out that at least 40% of all consumer spending can be postponed without damage to the health and welfare of the consumer.

Another important characteristic is that consumers will not buy when they expect a price drop. And nothing makes them more expectant of price cuts than talk of bad business and signs of curtailed production.

Last fall, the McGraw-Hill study mentioned above reports, consumers thought it was a "good time to buy." But about that time textile business began to dry up.

Why?

Economists give two reasons:

1. A slight decline in income, which did not become very general until after October
2. Gloomy talk of a recession, which had really got going at about the Fourth of July holidays

. . . And Textile Producers

By August and September, "Business is terrible" was an every-morning-before-breakfast chant in some areas of the textile industry. Astonishingly dismal pictures were painted of a depression-ridden industry, and these pictures were passed on to consumers by newspapers and news magazines.

Soon afterward, as we recall, the "business-is-terrible" chant was taken up by politicians of the Democratic party, finally being bandied around by such a high-up as Truman. They got into the act, of course, in an effort to make political hay against the Republicans. But the point is that businessmen started the chant; politicians only took it up because it suited their purposes.

There is no doubt that the wailers of woe justify themselves on the basis that the last part of the year was not good and, therefore, they were exercising accurate foresight. It probably would be more just to say that their wails caused a great part of any business decrease that occurred. The gloomy pictures they fed to consumers, exaggerated so far as the whole industry for the year was concerned, had only one result: the cagey consumer postponed buying textiles in expectation of price cuts.

Why the Wails

It has been brought to our attention a number of times in recent months that the hard-hit companies were usually those with obsolete plant and equipment, noncompetitive costs or quality, or products that were victims of changing markets.

It seems reasonable to say that most of the textile companies that experienced bad business last year had better look on it as the handwriting on the wall. It would be far better for all of us if these people, instead of frightening consumers away from textile-goods counters, would spend their wailing time and effort in getting their own plant and equipment, costs, quality, and products in line with their smarter competitors.

D. M. Thomas

Check on this at American Textile Machinery Show

New Catalog of Textile Leathers Offered by Rhoads

You'll certainly want to pick up a copy of Rhoads' new Textile Leathers Catalog at Booths 352 and 352AA. This handy, compact booklet describes and illustrates their complete variety of Textile Leathers. These include 42 varieties of Check Straps; Binder Leathers; Harness and Jack Straps; Spindle Bumper Straps; Lug and Hold-Up Straps; Lattice Apron Leathers; Condenser Tapes; Flat and Round Beltings . . . plus information on how to order. *It's free* with the compliments of J. E. Rhoads and Sons.

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Scheduled to Greet Visitors at ATM Exhibition

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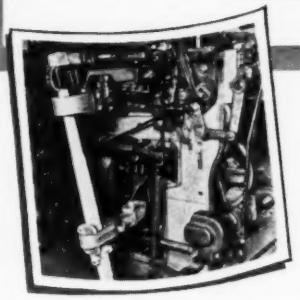
Reports during the past 8 years indicate

Twice the Life

from Rhoads Tannate Special Check Straps



"We get *twice the life* from Tannate Special Checks!" This statement is not based on a few tests made on a limited number of looms out in some corner of some mill . . . it is based on the actual experience (reported to us during the past 8 years), of more than a dozen mills weaving all types of cloth on roughly 7,146 looms.

These mills were using Draper model E, X, X-2, XD and XP looms, as well as Hunt looms. They were running their looms anywhere from 150 to 200 picks per minute, on a 3 shift day, 6 days a week . . . They were weaving everything from sheetings to corduroys. They were comparing the performance of Tannate Special checks with all makes and shapes of straps. In every case they reported *twice the life from Tannate Special Checks* over anything they had ever used before.

So, no matter what kind of check straps you are now using, it will pay you to try Tannate Special Checks. See for yourself why so many mills insist on straps cut from this special leather, tanned only by J. E. Rhoads & Sons.

Tannate Special Leather is cut to meet your requirements in our patented BiCut design, straight or curved, all available in four different weights, three degrees of firmness. Endless checks also made from Tannate Special Leather are available, single or double ply, in two weights.

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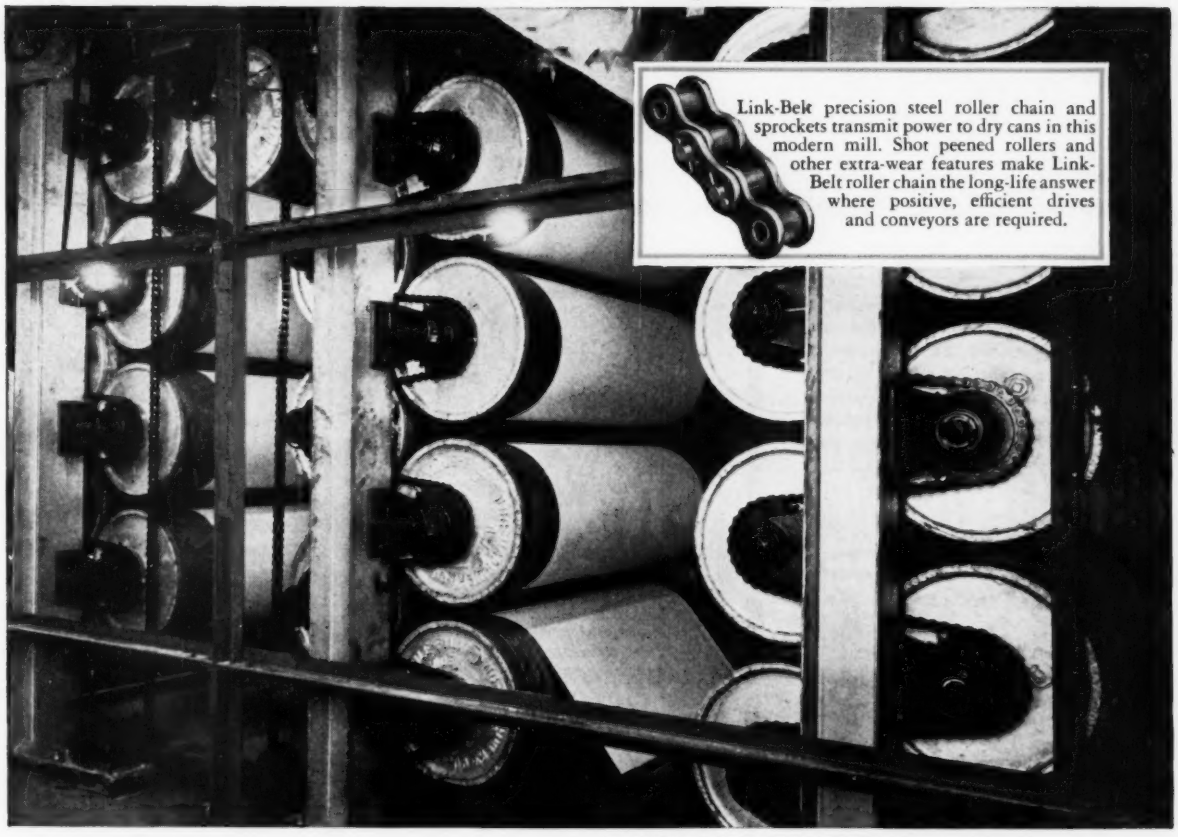
Is there one chain that best meets your drive or conveyor problem?



Link-Belt precision steel roller chain and sprockets transmit power to dry cans in this modern mill. Shot peened rollers and other extra-wear features make Link-Belt roller chain the long-life answer where positive, efficient drives and conveyors are required.

You'll find the answer in LINK-BELT's complete chain line... a size and type for every job

The application shown above is an example of how you can select the *one* chain best suited for a particular need from the complete Link-Belt line. And each chain is engineered to provide more efficient service at lower cost than so-called general purpose chain.

Whatever your requirements, you are assured of the *right* chain for the job when you rely on Link-Belt. And, remember—a chain bearing the Link-Belt double ⟩——⟨ arrow is your guarantee of longer chain life.

For information on the complete Link-Belt chain line, see the Link-Belt representative near you. He has the answers for efficient, low-cost drive and conveying chain performance.

LINK-BELT

CHAINS AND SPROCKETS

Typical chains from the complete LINK-BELT line

Ewart Detachable Link-Belt—A widely used, popular chain for average or normal-duty service on conveyors, elevators and drives.

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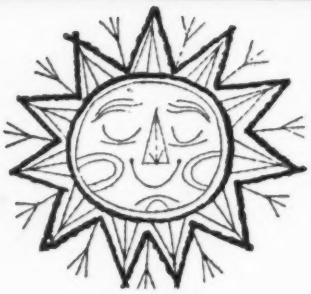
NAME YOUR HAZARD–CELAPERM'S NEW

PROVES FASTER THAN

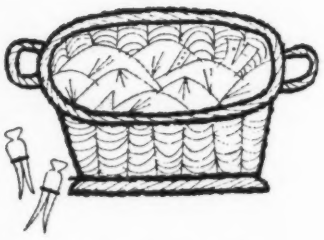
A range of 18 colors in Celaperm were tested against the best available matching vat dyes, according to American Association of Textile Chemists and Colorists' procedures. For purposes of demonstrating relative performance, a score of 1000 was used as perfect. Name your hazard. Here are the results. This is your proof of Celaperm performance.



LIGHT

Celaperm 923 Vat Dyes 728

American Standards Association recommends 60 Fadeometer hours light-fastness for drapery fabrics. All colors in Celaperm easily exceeded this. Many were unaffected after 320 Fadeometer hours.



WASHABILITY

Celaperm 1000 Vat Dyes 633

The result of Wash Test # 4, involving strong soap, high temperatures, and chlorine bleach—harsher treatment than most fabrics ever face.

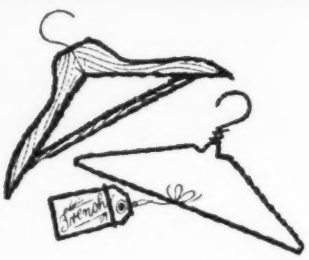
WEATHER

In special "weathering" tests designed to show color change in sunlight when fabric is wet, no Celaperm yarn changed color below 80 hours (well above accepted standards), the great majority were still unchanged at 320 hours.

PERSPIRATION

(acid and alkaline)

Celaperm 1000 Vat Dyes 1000

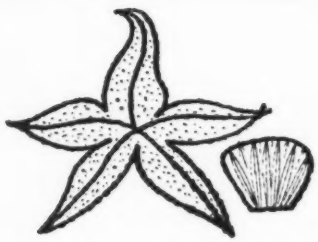


DRY CLEANING

Celaperm 1000 Vat Dyes 1000

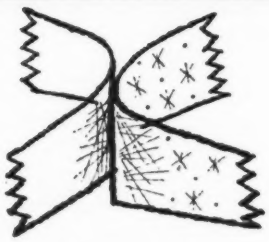
GAS FADING

Celaperm 1000 Vat Dyes 1000



SEA WATER

Celaperm 1000 Vat Dyes 1000



CROCKING

(wet) **Celaperm 1000 Vat Dyes 823**

(dry) **Celaperm 1000 Vat Dyes 1000**

Colors in Celaperm yarns will not rub off, either wet or dry.

COLOR RANGE ANY EVER MADE

Celanese*

CELAPERM*

the acetate yarn with the "sealed-in" color

Celanese does not *claim* unsurpassed fastness for its new range of colors in Celaperm acetate. Celanese *proves* it—with the exacting tests which the American Association of Textile Chemists and Colorists have established.

Here you see some of the most beautiful colors in the market equalling or surpassing the best vat dye performance in resistance to every common color hazard—from sunlight and washing to perspiration.

We are proud that every mill, maker and merchant can *trust* these colors completely for their fashion authority and performance. We are proud, too, that these record-breaking colors in Celaperm owe their overall color performance to pigments exclusive with Celanese.

Celanese Corporation of America, New York 16.

*Reg. U. S. Pat. Off.

For Processing and Finishing Wools, Cottons, Silks, Synthetics

When you use soap—You Can Depend On

COLGATE FORMULA 10

For the best job!

92% Sodium Oleate • titer on the fatty acids 10° Centigrade • easily dissolved • excellent detergent effect • mild fulling action when you want it • easily rinsed at low temperatures with no bad odor left in the fabric.

Yes, you can depend on COLGATE FORMULA 10* for dozens of textile processing and finishing jobs.

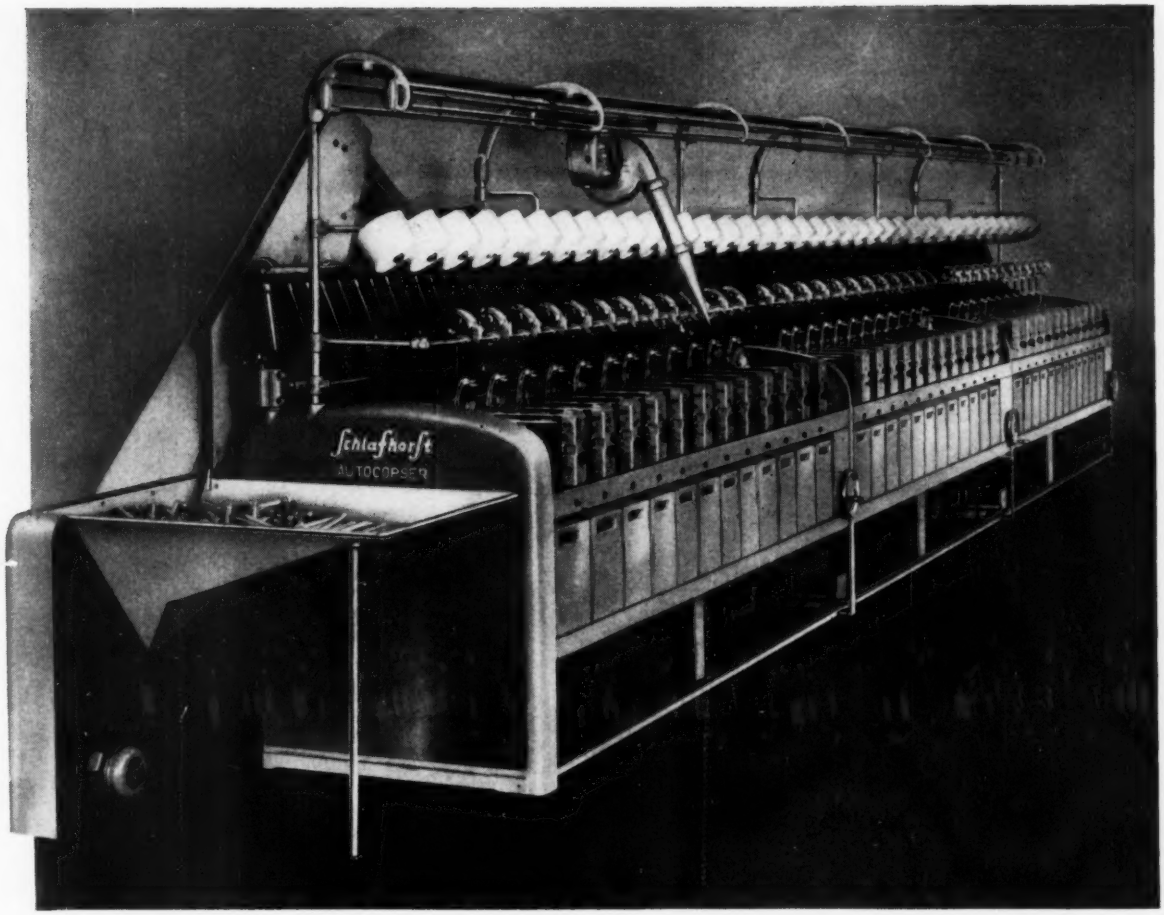
For low-temperature washing *ordinarily requiring olive oil soaps*, try COLGATE FORMULA 25.*

*Sold in eastern states only.

See your local C.P. representative for details, or write today to our Industrial Department.

FREE! New 1954 Handy Soap and Synthetic Detergent Buying Guide tells you the right product for every purpose. Get a copy from your C. P. representative, or write us at any one of the offices listed below.

COLGATE-PALMOLIVE COMPANY • Jersey City 2, N. J. • Atlanta 5, Ga. • Chicago 11, Ill.



The above illustration shows our fully automatic quiller "AUTOCOPSER".

It is equipped with rotary yarn guides that have no oscillating parts. Quilling speed is limited only by the quality of the yarn and tube material used. To meet the requirements of high speeds up to 12000 revs per minute, the machine is very substantially built. Each quilling head functions independently, entirely unaffected by automatic change of pirns or by stoppages caused by broken ends.

The special shape of the groove of the rotary yarn guide ensures firm winding at the apex of the conical yarn layers, without danger of damaging the yarn. The grooved guide drum is of wear-resistant material and runs in a single one-sided bearing. It follows the build of the quill, and thus simplifies attendance by making the quill easily accessible at every stage of its formation.

Manual servicing is confined to filling the magazines or hoppers (as the case may be) with empty tubes, taking care of occasional broken ends, and to creeling fresh packages. Attendance is reduced to a minimum and simplified throughout.

Quills are firmly held in position between a live centre and a dead one so as to run smoothly and without vibration even at highest permissible speeds.

A novel feeler device controls the advance of the yarn guide by means of a continually revolving threaded rod that is positively driven. The slightest contact between a wide but light feeler roll and the yarn body immediately engages the yarn guide feed with the negligible application of an infinitesimal amount of power. This is achieved by means of an exceedingly simple gearless shifting device developed for this special purpose. The sturdy yet extremely sensitive mechanism has the sole functions of (1) *controlling the point* at which the steadily-turning threaded spindle must provide the necessary feed and (2) the *duration of time* for which this feed is continued.

Moreover, a continual displacement of the yarn layers is obtained by suitably utilizing the alternating feed and retractive shifts.

Upon contact between yarn body and feeler roll, the required lengthwise movement of the yarn guide is obtained each time. Since the feeler roll turns without rubbing against the yarn body, the most delicate yarns can be pirned without damage, at the highest speeds. Control of feed by the above-mentioned shifting device results in perfect pirns.

W. SCHLAFHORST & CO., M. GLADBACH, GERMANY

Schlafhorst

Autonomat

 For more information, write direct or use Reader Service post card.

News about

B. F. Goodrich Chemical *raw materials*

Looking for ways to improve textile products?

Check these *Hycar* Latex advantages

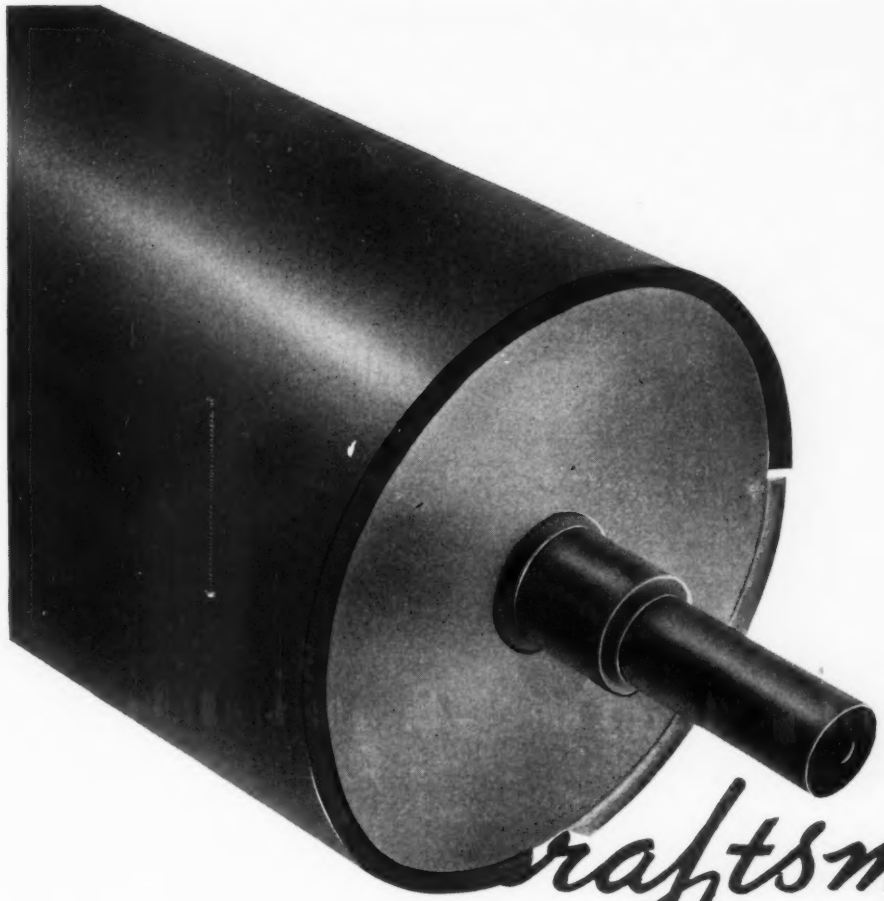
Apply this reference listing of the uses for Hycar latex to your textile products or applications. It may give you helpful ideas—point the way to developing or improving more saleable products. For further information and a fact-filled booklet on Hycar latex, please write Dept. HZ-2, B. F. Goodrich Chemical Company, Rose Bldg., Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

Fabrics	Use Hycar Latex—
Cotton	. . . as a permanent warp yarn size to provide abrasion resistance during weaving; and wear resistance to the finished fabric; . . . as after-treatment to improve wearing qualities and to provide a full hand; . . . as a carrier for specialty active agents such as fungicides and flame proofing chemicals; . . . as a binder for waxes and metallic salts used for water repellency or stain resistance.
Rayon	. . . as permanent warp yarn size with starch for increased seam strength.
Rayon Cotton	. . . with urea-formaldehyde resin to prevent deterioration of fibers when large amounts of U-F resin are used for crease and wrinkle resistance; . . . as a binder for pigment coloring and printing; . . . as a binder for non-woven fabrics.
Cotton Wool	. . . as after-treatment to reduce crock particularly with red naphthol dyes.

Hycar Reg. U. S. Pat. Off. *Latex*

B. F. Goodrich Chemical Company
A Division of The B. F. Goodrich Company

GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers • HARMON colors



Craftsmen *in* **RUBBER**

BUILD ***PERFORMANCE***

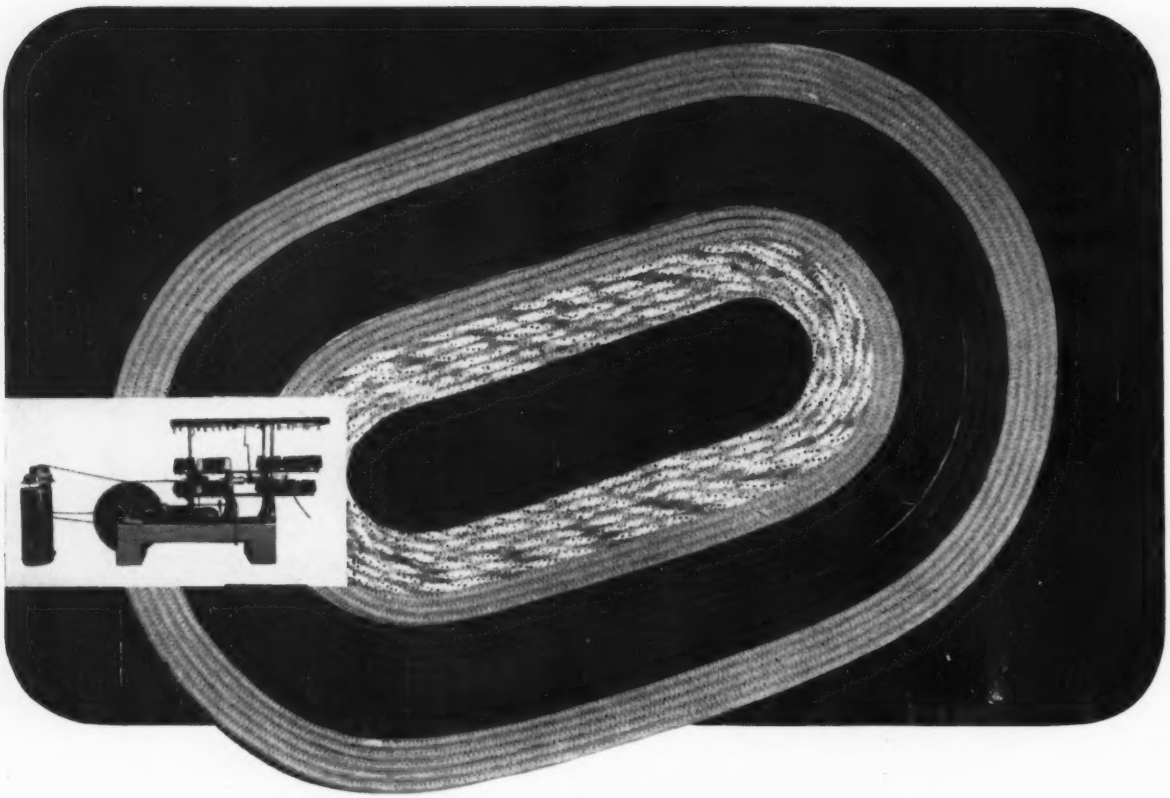
into **STOWE-WOODWARD**
Rubber Covered Rolls

S-W INC.

STOWE-WOODWARD, Inc.

Craftsmen in rubber

NEWTON UPPER FALLS 64, MASSACHUSETTS



IT'S NEW!
IT'S KNITTED!

...WITH THE FIDELITY HIGH-SPEED KNITTER

Now you can knit rugs continuously in unique pattern designs in a fraction of the time it would take to braid them—and reduce your labor and operating costs, too. Unusual safety features and fully automatic electric stop motions for yarn and filler supply add to the simplicity of operation. Yarns used as purchased in cones, eliminate costly rewinding.

Write today for additional information about fast, economical production of quality rugs by the High-Speed Fidelity Knit method. See the Fidelity High-Speed Knitter in operation in the new showrooms at our Philadelphia plant.

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Now! Medley's Adjustable Guage Twister

for LARGER PACKAGES...

KNOT-FREE YARNS *at higher speeds*

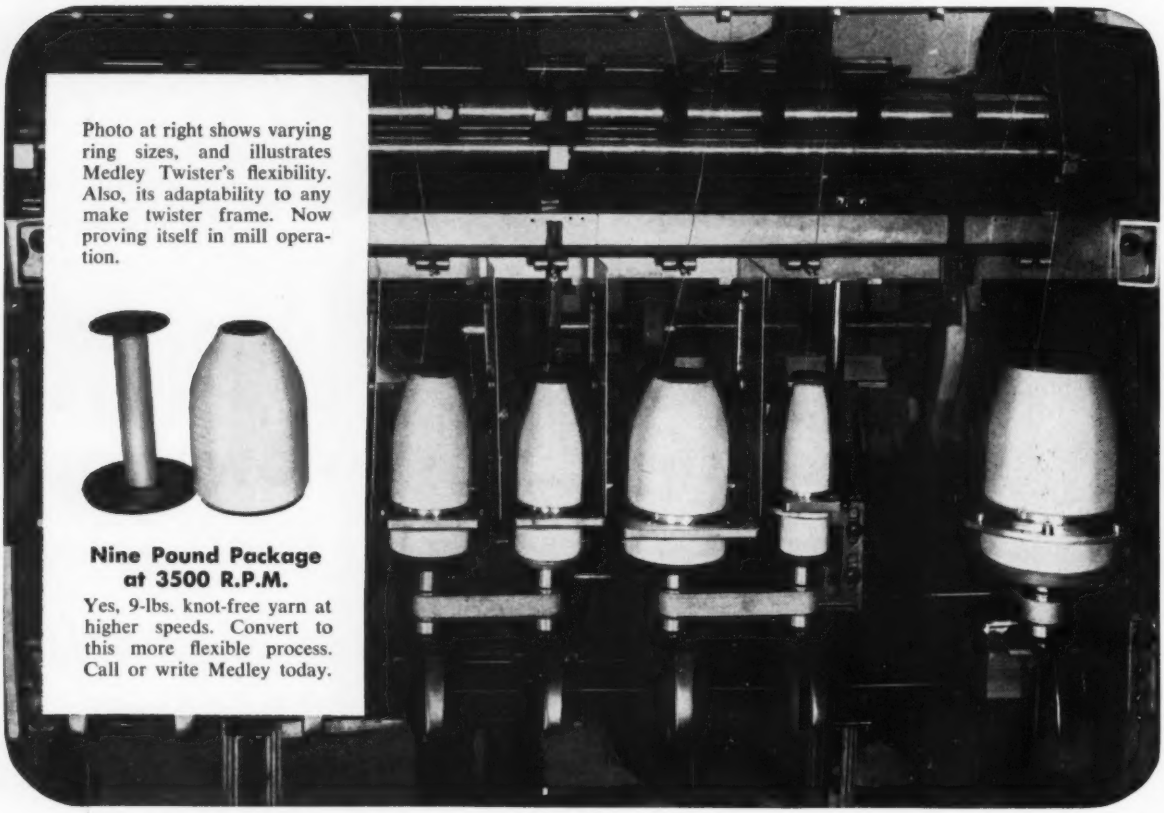

Photo at right shows varying ring sizes, and illustrates Medley Twister's flexibility. Also, its adaptability to any make twister frame. Now proving itself in mill operation.

Nine Pound Package at 3500 R.P.M.

Yes, 9-lbs. knot-free yarn at higher speeds. Convert to this more flexible process. Call or write Medley today.

- **Adjustable Guage**
- **Adjustable Traverse—eight to 12 inches maximum**
- **Exact ring concentricity improves quality**
- **Amazing reduction in doffing and donning costs**
- **Reduces winding costs**
- **Adaptable to your frames, regardless of make**
- **Highly competitive with latest model twisters—some features that newest models lack**

NOW, WITHIN REASONABLE LIMITS, you can produce a size yarn package to your customer's specifications at speeds never before attained (up to 50% higher Traveler speeds). Adjustable guage features allow twisting elements to be positioned lengthwise of the frame at any point. Moveable spindle rail allows adjustment to any popular traverse. New design, high strength side rails provide adequate rigidity. And the simple adjustment to exact ring-to-spindle concentricity assures smooth yarn flow and an improved quality. Full length separators are adjustable to suit traverse required.

You need no longer be confined to a fixed guage, or size and type of yarn. The Medley Twister will adapt your frames to twist yarns of various types and sizes, producing a package to any reasonable weight specification. Proved in mill operation.

Investigate today. Write or call Medley. See this *newest* innovation in twisters.

MEDLEY Manufacturing Co.

400 32nd Street, Columbus, Georgia

For more information, write direct or use Reader Service post card.

Eloquently as a thousand words
this picture tells the graphic story
of fashion's trend toward simple lines
coupled with ingenious textures and
brought to life by magnetic color effects.

Anticipating your ever-changing needs,
we have been expanding our services
in several directions simultaneously . . .
adding interesting new colors to our lines,
increasing personnel and facilities of our
color research and application laboratories,
issuing up-to-date color cards and bulletins,
re-orienting branch office services and
balancing local warehouse stocks.

Today we can serve you better than ever
with low-cost matches and formulas on your
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delivery of the dyes you need at every step
from samples to mill runs to fill-ins.

National Aniline Dyes

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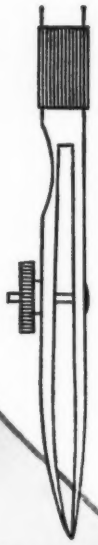
Allied Chemical

AGAIN!

SUPREME ENGINEERING

multiplies knitting efficiency with this new striper...



MODEL SAAF-C

New, "One-Machine Knitting Mill" Has 32 Striping Feeds... Doubles Production... Gives Greater Pattern Variety... Unprecedented Convenience and Safety

Supreme engineering has a reputation for cutting cloth production costs by multiplying machine efficiency. The SAAF-C variable striper and pattern placer is the newest advance in that successful record.

HAS 32 FOUR-COLOR STRIPING BOXES, 32 PATTERN WHEELS, 32 PATTERN PLACERS

It's a super-improved version of Supreme's famous SAAF, with double the production capacity on certain fabrics, plus a terrific increase in pattern versatility. The SAAF-C combines in one machine all the knitting ability of all other Supreme stripers plus important new features which accelerate high quality output and simplify operation. In addition to variable striped fabrics, pattern wheel fabrics and Pattern Placer fabrics the Model SAAF-C knits lay-in fabrics, knit and tuck cloth, and knit and welt cloth.

NEW "STEP-DESIGN" YARNSTAND (PAT. PEND.) BOOSTS EFFICIENCY, SPEED AND SAFETY

Holds 128 cones, each clearly visible and easily accessible. Sufficient headroom for knitter to work beneath stand without stooping or bending. Rugged, stationary anti-vibration construction facilitates faster cylinder speeds, assures greater safety.

NEW STRIPING BOX DESIGN SIMPLIFIES SETTING

Design drum has been redesigned to permit sure, simple, manual setting... without screwdriver or wrenches. Adjusting studs have been replaced by a slideable jack which remains permanently in the drum and is easily shifted by hand to engage the proper striping finger. Eliminates misalignments. More compact design gives operator better view and easier access.

NEW PATTERN PLACER DESIGN GIVES FINGER TIP CONTROL

No tools needed to set pattern placer. Slideable studs, permanently self-retained in design drum, provide easy, finger-tip control of operation.

NEW SCISSOR-TYPE SYNCHRONIZED "NO-WASTE" CUTTERS

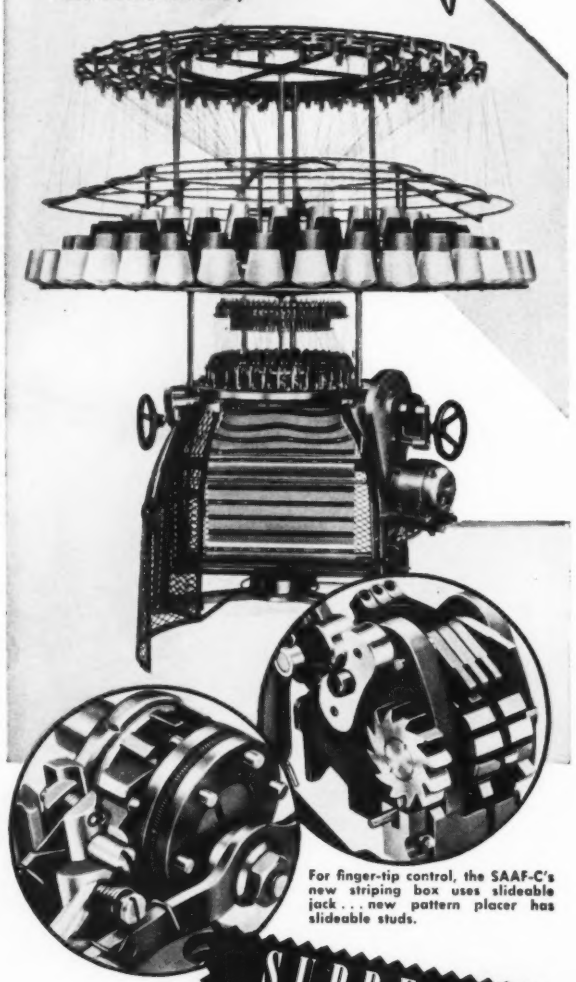
Each striping box has exclusive new scissor-type cutter which is positive and foolproof.

IMPROVED KNITTING ELEMENTS SYSTEM

Protects production quality. Eliminates interference from needles in welt position which causes "skips" or drop stitches in some 3-position pattern work.

MANY OTHER FEATURES

This quick look at the SAAF-C cannot cover all of the outstanding design and construction features embodied in this amazing machine. To get complete details contact Supreme, today.



For finger-tip control, the SAAF-C's new striping box uses slideable jack... new pattern placer has slideable studs.

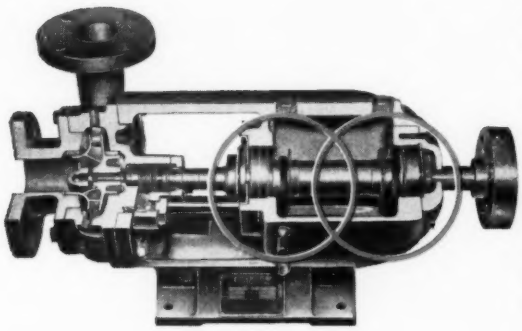
SUPREME
KNITTING MACHINE CO., INC.
94-02 104th STREET, OZONE PARK 16, N. Y.
Southern Representative and Showroom
The Mallack Co. 711 S. Tryon St. Charlotte N. C.

SK-173

This Ring Takes a Fling

To give you a Cradle-Mounted Pump

THAT'S WORTH MORE



This oil ring is the best known method of lubricating cradle-mounted pump bearings. Two of them ride the shaft of Ingersoll-Rand's CRV pumps, dip into the oil reservoir, fling an abundance of oil and mist onto the ball bearings.

But these are more than just flinger rings. They are examples of the extra value that's built into every I-R cradle-mounted pump . . . to give you more for your money in design and construction, that adds up to longer pump life with less maintenance.

There are easier, less expensive ways to lubricate bearings; easier, cheaper ways to build pumps—but none of these are the Ingersoll-Rand way. Check today on the I-R way of building more on-the-job value into every pump. Your nearest distributor or Ingersoll-Rand branch office will be glad to tell you, without obligation, the complete story about Cradle-Mounted pumps and Motorpumps.

Cameron Pumps ARE Better

9-3

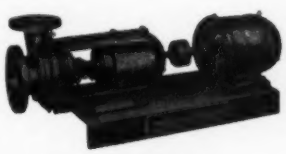
Ingersoll-Rand

Cameron Pump Division
11 Broadway, New York 4, N. Y.

Single-Stage Motorpump
Capacities to 1800 GPM

Two-Stage Motorpump
Capacities to 300 GPM

Four-Stage Motorpump
Capacities to 60 GPM



Cradle-Mounted Pump
Capacities to 2600 GPM

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STANDARDIZE!

ECONOMIZE!

with the bushing that's interchangeable

TAPER-LOCK

A PATENTED PRODUCT OF DODGE

Now mount 'em all—your sheaves, sprockets, couplings, conveyor pulleys —with Taper-Lock bushings. You'll save time, save money, and keep production rolling by standardizing on these interchangeable bushings.

Taper-Lock, a patented product of Dodge, provides the simplest, surest means of mounting wheels on shafts. Dodge Taper-Lock products slip onto the shaft easily, quickly—hold with the firmness of a shrunk-on fit. They come off easily—no hammer, no crowbar, no shock to bearings or machinery.

Taper-Lock bushings fit in every one of the Dodge products pictured above. You can shift from a sprocket to a sheave, for instance, and use the same bushing. And Taper-Lock bushings are available in a range of sizes which makes changing from one size shaft to another equally easy and quick.

With a few Taper-Lock bushings you can make quicker changes and cut down-time on production machines. Get the facts now.

DODGE MANUFACTURING CORPORATION, 1400 UNION STREET, MISHAWAKA, INDIANA

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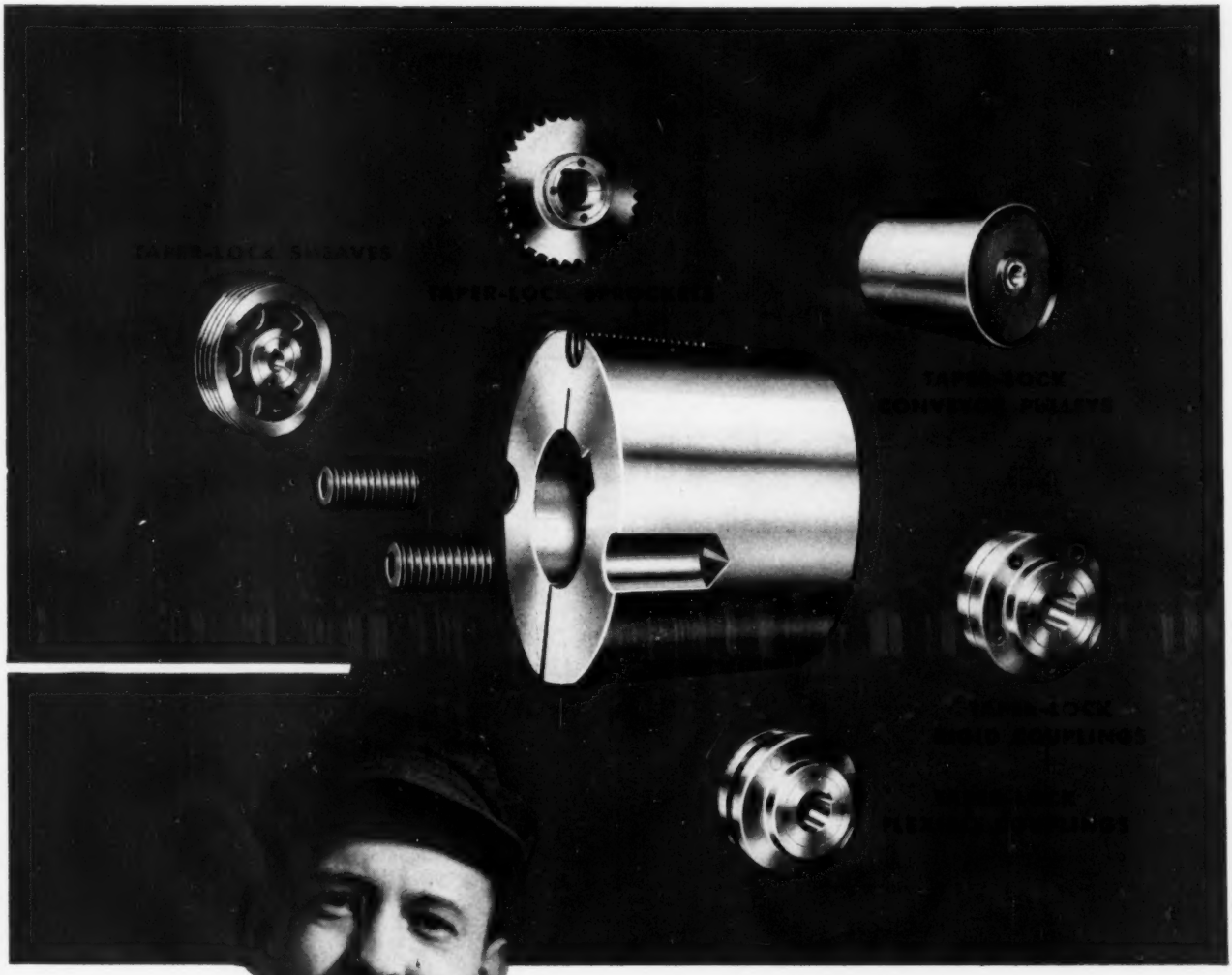
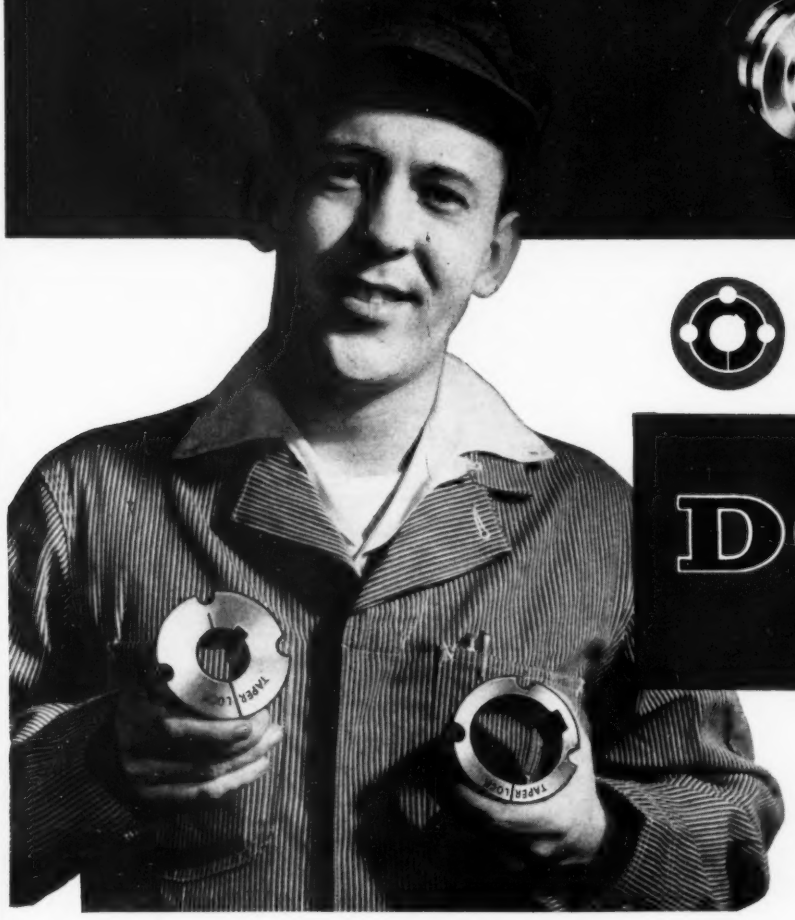




THERE'S ONLY ONE TAPER-LOCK,
THE BUSHING THAT MOUNTS FLUSH!

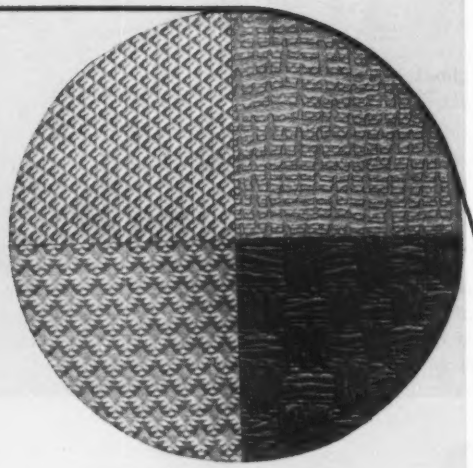
DODGE

of Mishawaka, Ind.

CALL THE TRANSMISSIONEER, your local Dodge Distributor, for valuable assistance on new, cost-saving methods. Look for his name under "Power Transmission Machinery" in your classified phone book, or write us.

THREE-POINT SERVICE...

Use the right resin the right way...



1 **A full line of resins...melamine, urea, modified urea (Resloom E-50)...** for embossed effects and crease-resistant applications. A series of three "AC" catalysts to meet your exact curing requirements.

2 **Unique development and evaluation facilities...** including the *first* lab-scale embossing machine. This machine is typical of Monsanto's basic position in the field of embossed fabrics.

For more information, write direct or use Reader Service post card.

Key to profitable embossing

Take advantage of Monsanto's

RESIN TECHNOLOGY

3 Experienced technical personnel. Many basic chemical aids for the textile industry are Monsanto developments . . . and Monsanto people, both in the lab and in the field, have had years of specialized practical experience.

Take advantage of Monsanto's Three-Point Service and discover the key to profitable embossing. Three-Point Service gives you every benefit of advanced textile resin technology—shows you how to use the *right resin* the *right way*.

Monsanto's basic position in the embossing and crease-resistant field starts: (1) With a complete line of thermo-setting resins . . . melamine, urea and modified urea . . . and three efficient catalysts. (2) Applications for these resins are developed and evaluated *by Monsanto*—using unique equipment such as the Butterworth laboratory-size embossing machine. (3) To complete the picture, expertly trained Monsanto sales and technical personnel translate their "know-how" into profitable production of saleable products in *your* plant.

To take advantage of this Three-Point Service, get in touch with MONSANTO CHEMICAL COMPANY, Textile Chemicals Department, Springfield 2, Mass.

Resloom E-50 Has Many Advantages

Resloom E-50, the most recent addition to Monsanto's broad line of finishes, is a modified urea resin with distinct advantages in deep embossed, Schreiner and glazed applications. It makes possible durable effects with improved hand characteristics—causes no yellowing of whites due to chlorine pick-up. Furthermore, Resloom E-50 simplifies processing in these ways: Does not build up on texturizing equipment, has excellent storage life and bath stability, is compatible with hand modifiers, durable to alkaline wash.

Resloom: Reg. U. S. Pat. Off.

Because there is no substitute for experience . . . consult

MONSANTO

SERVING INDUSTRY . . . WHICH SERVES MANKIND

For more information, write direct or use Reader Service post card.

The one apron made

NO SLIPPAGE HERE
Black outer face has the right friction to keep the top apron moving smoothly. This prevents yarn irregularities which occur when aprons slip at points of contact.

RUNS CLEANER HERE
White inner face won't attract loose fibers, doesn't tend to build up excessive waste inside the apron.

RUNS SMOOTHER HERE
Carefully regulated surface friction of inner face allows smooth, sure transfer of power from driving roll to apron, yet prevents jamming or buckling at the pins.

ARMSTRONG'S ACCOTEX

expressly for frames with close-pin cradles

Armstrong's NO-7075 Apron

- *eliminates top apron slippage*
- *runs cleaner inside*
- *runs smoother inside and out*

The newest double-apron frames have pins set closer together than ever before. To get the best possible yarn with these new frames, you need an apron specially designed for close-pin cradles . . . Armstrong's NO-7075 Accotex® Apron.

Compared with conventional aprons, the NO-7075 has shown three decided advantages. First, the black outer face has enough surface friction to keep the top apron running smoothly without slippage—and without yarn irregularities.

Second, the NO-7075's white inner surface has the smoothness needed to slide over the pin without jamming or buckling. Yet it still has sufficient friction to grab the drive roll and keep drafting tension right.

This white inner surface also runs clean—cleaner than you've ever seen an apron run. Special electrolytes added to this rubber compound tend to repel loose fibers and keep them from forming hard-to-clean deposits inside the apron.

In addition, the NO-7075 has all the qualities you expect in an Accotex Apron—tear and abrasion resistance, excellent flexibility, and a cord interliner that absolutely prevents stretching or curled edges.

If your frames have close-pin cradles, or if you're planning to install them, this newest Armstrong apron can make a difference in yarn quality and downtime. To arrange a test of NO-7075 aprons in your mill, ask your Armstrong man or write Armstrong Cork Co., Textile Products Dept., 6404 Dauphin St., Lancaster, Pa. Available for export.

APRONS

A complete line of top-quality aprons

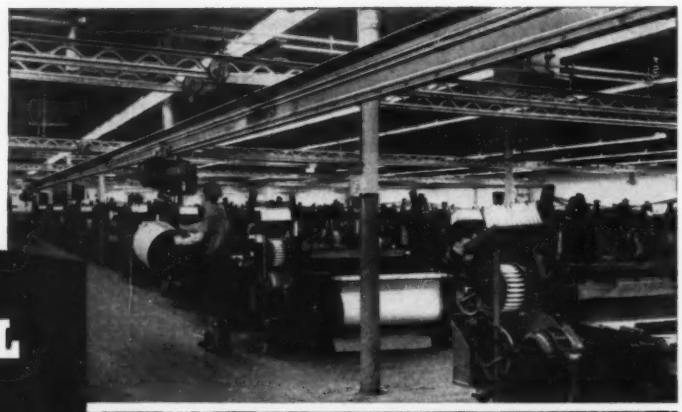
FOR CLOSE-PIN CRADLES. The NO-7075 apron gives you smooth, clean operation on the latest type equipment.

FOR SINGLE-APRON SPINNING. The super-flexible NO-750 insures smooth slip-roll action needed for uniform yarn.

FOR DOUBLE-APRON SPINNING. The NO-700 Accotex is smooth and long wearing, first choice in hundreds of mills.

For more information, write direct or use Reader Service post card.

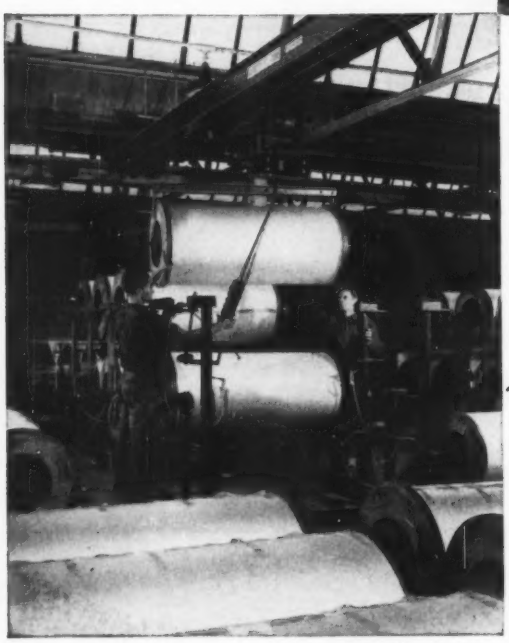
USE MONORAIL CRANES



. . . Where Space is Limited

. . . To Handle Variable Jobs

. . . For Low Maintenance Cost



These are just a few reasons why American MonoRail Cranes are gaining in popularity and are being installed in increasing numbers of plants the country over. Call in your American MonoRail representative and have him tell you all the advantages of MonoRail Cranes such as—ease of handling—smooth travel—strength—safety interlocks—power operation and **interlocking carrier service between and beyond the craneways.** Consultation in connection with any handling problem is available without obligation.

Send for your copy of C-1 Bulletin

AMERICAN OVERHEAD HANDLING EQUIPMENT

MONORAIL COMPANY

13108 ATHENS AVENUE • CLEVELAND 7, OHIO

For more information, write direct or use Reader Service post card.

NOW FROM ROHM & HAAS

TRITON AS-35

A stable, high-foaming detergent, wetting agent, and level dyeing assistant

TRITON AS-35 is characterized by high foam, excellent detergency, and good wetting and level dyeing properties. TRITON AS-35 possesses excellent softening and lubricating properties for protecting fiber, yarn, or fabric during severe processing.

For kier boiling of cotton goods, TRITON AS-35 is mutually soluble and beneficial with pine oil, and gives fabrics improved absorbency and greater uniformity. Yet it shows no defects attributable to channelling or scum caused by hard-water soaps.

Its excellent detergency and high foaming properties make TRITON AS-35 extremely effective for soaping off prints.

For scouring piece goods, the cushioning effect of TRITON AS-35 suds minimizes wrinkling and creases.

Consider TRITON AS-35 as a level dyeing assistant for fast wetting in acid dyeing, uniform shades of good clarity with direct dyes, and increased dispersion and color value of acetate dyes.

Write today for complete information on TRITON AS-35

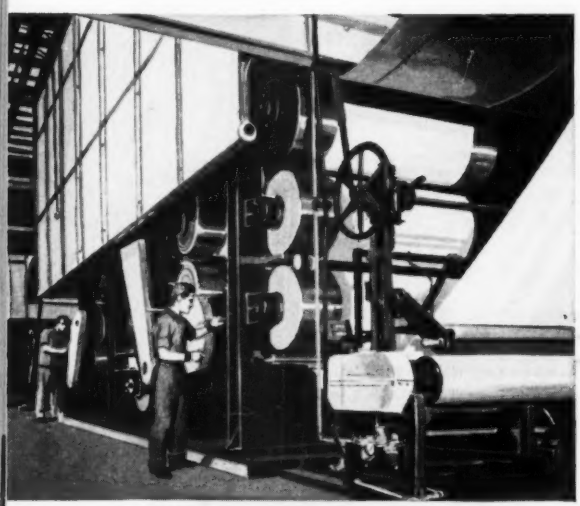
CHEMICALS FOR INDUSTRY

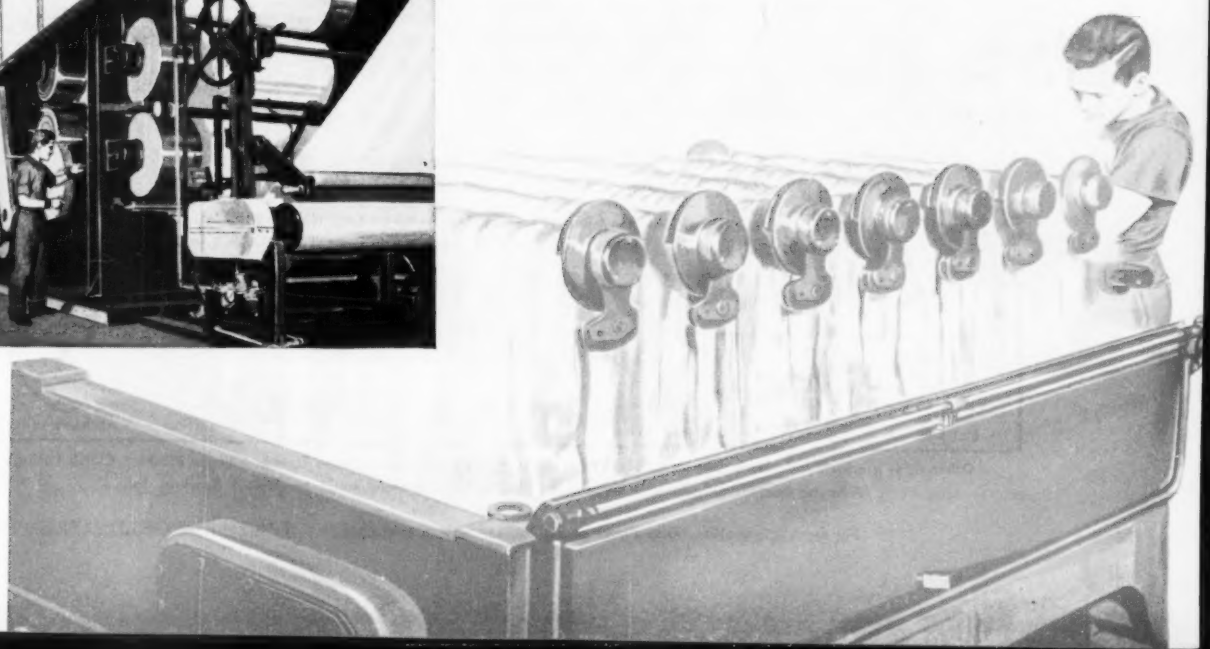
ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

TRITON *is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.*





UNIFORM PRODUCTION
MORE USE PER DOLLAR

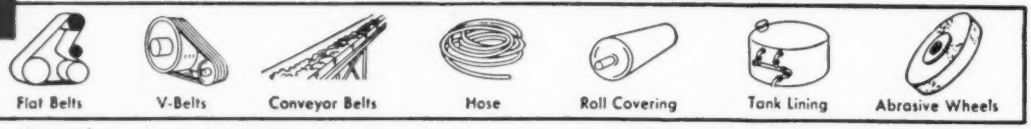
MANHATTAN RUBBER COVERED ROLLS

Manhattan Rubber Covered Rolls assure you of high-speed, uniform production. They won't crack, harden, corrugate or oxidize. An exclusive Manhattan process provides an inseparable bond of rubber to metal . . . eliminates separation of rubber cover from the metal core and reduces loss due to downtime.

Custom-made to your specifications, Manhattan Rubber Covered Rolls give you permanent density and long, trouble-free service . . . "More Use Per Dollar" under all working conditions. Call an R/M roll covering specialist to discuss your requirements.

ROLL COVERING PLANTS AT PASSAIC, N. J. — NEENAH, WIS. — NORTH CHARLESTON, S. C.
MANHATTAN RUBBER DIVISION — PASSAIC, NEW JERSEY

RAYBESTOS-MANHATTAN, INC.



Other R/M products include: Industrial Rubber • Fan Belts • Radiator Hose • Brake Linings • Brake Blocks • Clutch Facings
Asbestos Textiles • Packings • Engineered Plastic, and Sintered Metal Products • Bowling Balls RM 412

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WE'RE AT HOME...

OUT ON A LIMB!

As part of our Wool Oil Service we Guarantee you Definite Benefits in Writing!

We're willing to go out on a limb—guarantee you definite benefits in writing—because the wool oil service we provide, *the most comprehensive in the industry,* has proved so completely successful wherever used. Here's what we offer:

Scientific Analysis of your mill operations by a Socony-Vacuum engineer.

Complete Engineering Report with recommendations of correct wool oils.

Proved Products that meet desired degrees of scourability and discoloration resistance.

Laboratory Service where tests are made of mill samples to control performance on the job.

Progress Reports to show efficiency of fiber lubrication, recommend further improvements.

Why not take advantage of this exclusive wool oil service to improve *your* operations?

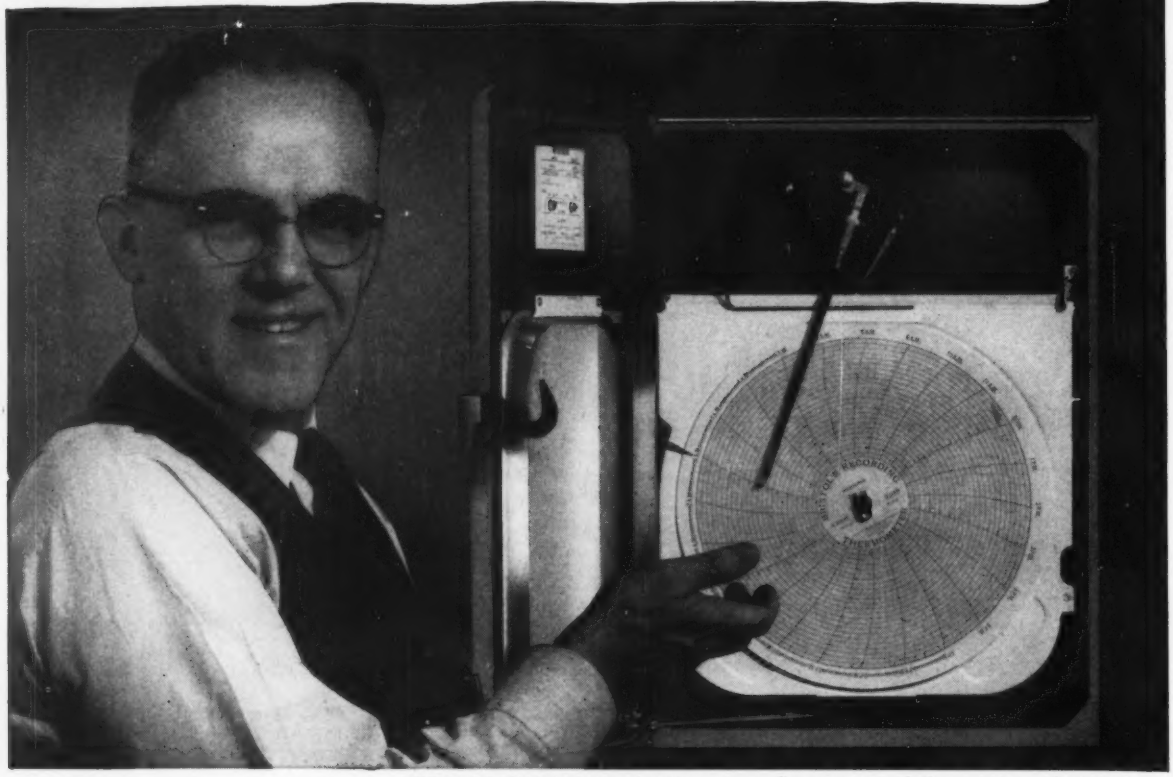
SOCONY-VACUUM

... process products

Process Products
SOCONY-VACUUM

SOCONY-VACUUM OIL CO., INC., 26 Broadway, New York 4, N.Y. and Affiliates: MAGNOLIA PETROLEUM CO., GENERAL PETROLEUM CORP.

WHAT'S NEW AT BRISTOL . . . . WHAT'S NEW AT BRISTOL

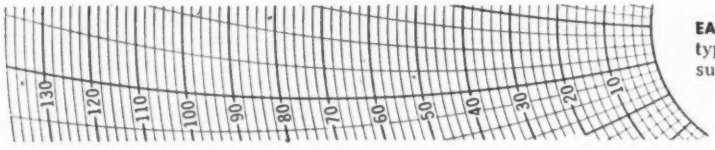


HIGH-SPEED RESPONSE AND ACCURACY are characteristic of the new Bristol Dual-Filled Vapor Pressure Thermometers. Unlike conventional vapor pressure thermometers, the Bristol units can be read with equal ease and accuracy throughout the entire measured range.

Another Bristol first — Dual-filled Vapor Pressure Thermometer with uniform linear scale

• These new instruments are the latest example of Bristol's continuing leadership in the field of industrial thermometry. They represent the first really important advance in filled-system thermometer design in more than 25 years. With this new development, all the valuable features of the vapor pressure system are retained. In addition to the linear scale, the elimination of ambient temperature effects makes new standards of accuracy possible.

Get the complete story on these rugged, precision instruments. Write for free 48-page bulletin T840. It will tell you all about typical installations, ranges, charts, bulbs and tubing. The Bristol Company, 103 Bristol Road, Waterbury 20, Conn.



EASY-TO-READ. This full-size section of a typical Bristol Dual-filled Vapor Pressure Thermometer chart shows the extreme clarity and definition of its uniform linear scale.

4.12

BRISTOL

POINTS THE WAY IN HUMAN-ENGINEERED INSTRUMENTATION

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS

For more information, write direct or use Reader Service post card.

There's a

NOPCO® TEXTILE CHEMICAL

to save you time and trouble

on **EVERY FIBER** *and* **FABRIC**

Nopco-developed processing chemicals are "lending a good right hand" to manufacturers throughout the textile industry. Whether they are treating natural fibers, synthetics, or both, users of Nopco's scientifically prepared chemical aids and assistants are daily realizing new economies in processing.

Typical Examples of Nopco Textile Chemicals are:

- **NOPCOSTAT* SERIES** . . . a complete range of processing and finishing aids for all types of fibers. *Contain maximum antistatic control.*
- **NOPCOWET* LINE** . . . a series of exceptionally effective wetting and rewetting agents. *Applicable in strong and mild acid, alkaline, and neutral solutions.*
- **NOPCONE* OILS** . . . an extensive group of coning products built to produce optimum cone qualities in coning and winding operations. *For all yarns.*
- **NOPCOTEX* SOFTENERS** . . . a broad line of high quality softening compounds. *For all types of fibers and fabrics.*
- **NOPCOSIZE* SERIES** . . . sizing solutions that permit high loom speeds with minimum shedding. *For all types of natural and synthetic fibers.*

More than 150 Nopco processing chemicals are busy helping to improve the quality of textiles, reduce waste, lower production costs. We'll gladly supply information—and make recommendations based upon your particular needs.

*TRADEMARK

NOPCO
CHEMICAL COMPANY Harrison, New Jersey
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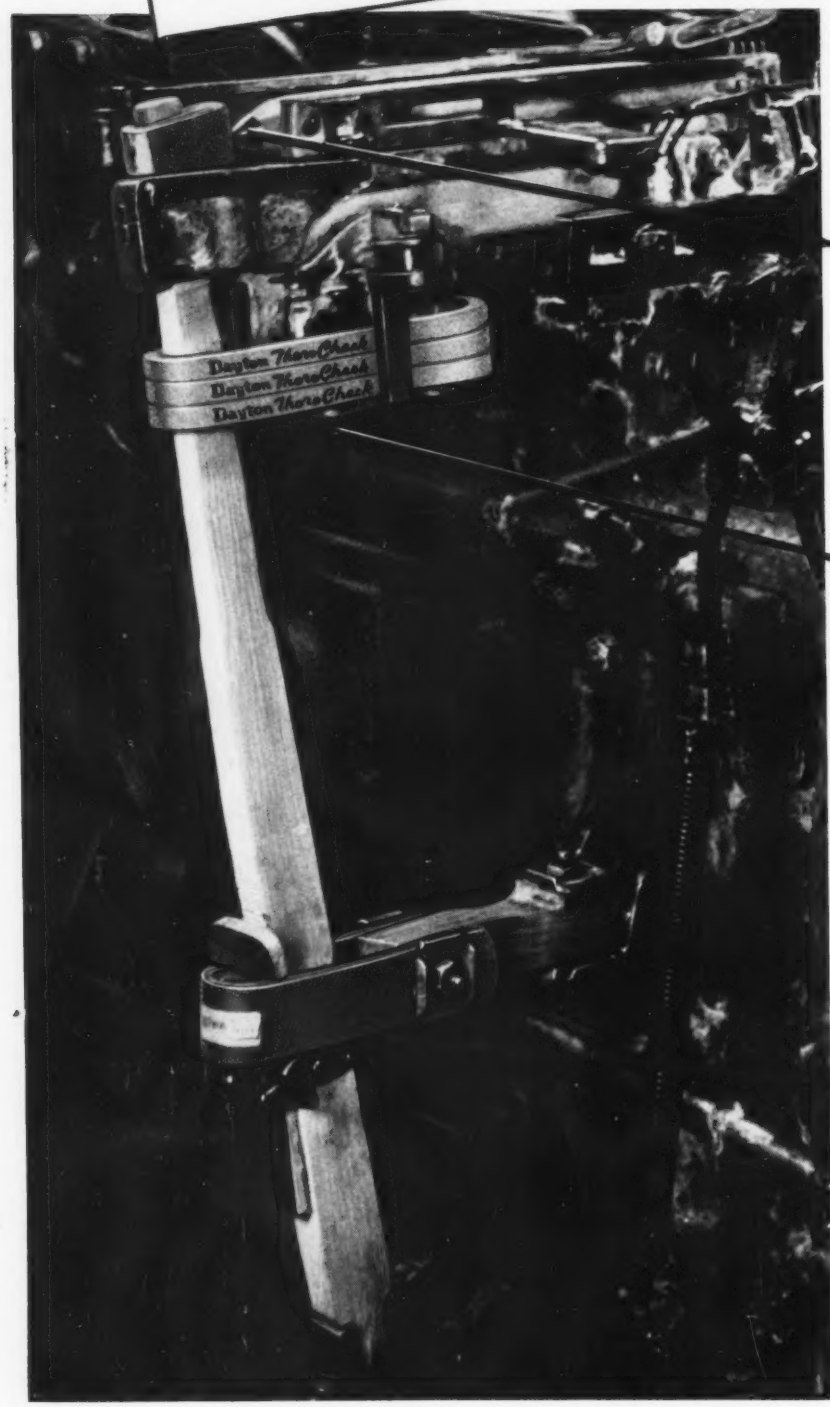
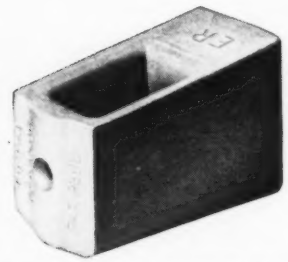
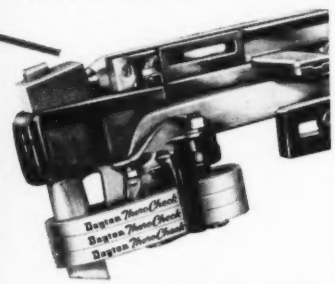
MILL PROVED

Dayton Cut

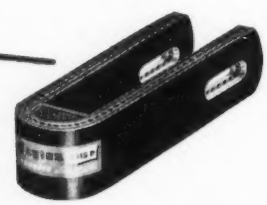




Dayton Thorobred Loop Pickers often last twice as long as other pickers because of scientific design which increases efficiency, reduces wear. Will outpick any ordinary picker on the market.



Dayton ThoroCheck Endless Check Straps save time and money in **weaving** operation—outlast old style check straps 2 and 3 to 1. Need little or no adjustment.



Dayton Thorobred Deluxe Lug Straps with built-in cushions, save wear and tear throughout entire loom by more effectively absorbing shock of picker stick thrusts—keep maintenance costs low.

For more information, write direct or use Reader Service post card.

Textile Products
Weaving Room Costs

The proof is on the loom—and that's where Dayton ThoroChecks, Thorobred Lug Straps and Thorobred Loop Pickers are cutting maintenance costs, reducing down-time and increasing production every day!

In the search for new economies, you can be *assured* of savings with Dayton "mill-proved" products. Look at the results actual mill installations are producing:

One eastern mill* installed Dayton ThoroCheck Endless check straps, ran them at 182 picks per minute. After *14 months*, they were still going strong—no signs of wear, no adjustment needed. The savings in replacement costs, time and labor have paid for the installation and change-over time and again.

Mill case histories such as this clearly illustrate how Dayton ThoroChecks are forcing costs down through longer, trouble-free service. Many mills report as much as 25% to 50% savings upon conversion to Dayton ThoroChecks.

Intensive research and development have made this outstanding performance possible. Daytons give you a safer endless strap that checks more smoothly, eliminates drag over the stick, stops it with less impact on each strap, and functions efficiently at highest speeds. Result—less wear and longer life with every set of Dayton ThoroChecks. Unaffected by temperature or humidity, ThoroChecks give fast, efficient starts after week-end shutdowns, making possible sizeable increases in production.

For *complete* control of picking motion costs, back up ThoroChecks with Dayton Thorobred Lug Straps. The built-in cushion feature absorbs the terrific thrusts of quick starts and stops and saves wear generally throughout the loom. Proper "give" and immediate "recovery" effect longer life and lower replacement costs.

Dayton specially designed Loop Pickers compound your savings because they're built to stand up for long periods under the pounding of high-speed shuttles, give perfect shuttle contact because of the slightly tilted construction. They stay put on the stick, keep their shape, and practically eliminate jerked-in fillings. Rounded front edges prevent hanging-filling; narrow back permits free non-wear on lay in strap. Last twice as long as other types of pickers.

**Name on request*

No other combination can guarantee the efficiency and economy of this mill-proved Dayton trio. Get complete details, mail coupon today!

Dayton Rubber

Since 1905

Textile Products for Better Spinning and Weaving

Dayton Rubber Co., Textile Division,
Woodside Bldg., Greenville, S. C.

Dayton Rubber Co., Textile Division, Dept. 343
Woodside Building, Greenville, S. C.

Yes, I'd like to reduce operating costs on my looms. Send additional cost-free information on:

- ☐ Dayton ThoroCheck Endless Check Straps
- ☐ Dayton Thorobred Deluxe Lug Straps
- ☐ Dayton Thorobred Loop Pickers

*Name*_____

*Mill Name*_____

*Address*_____

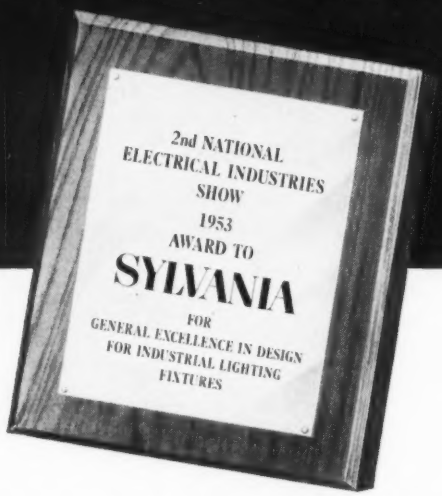
*City*_____ *Zone*____ *State*_____

BEST DESIGNED INDUSTRIAL FIXTURE

New Sylvania IC Fluorescent Fixture...

wins award for best design at Electrical Industries Show

SAVES MAINTENANCE DOLLARS, TOO!



LIGHT FOR FREEDOM · POWER FOR PROGRESS

In addition to top design honors, this improved Sylvania IC Fluorescent Fixture also wins in lighting efficiency and low maintenance.

Metal parts are Bonderite treated to resist deterioration. Channels, shielding, and steel panels finished in Sylvania's Miracoat baked enamel offer 86% reflectivity . . . keep their high efficiency for years.

Wonderfully versatile!

This fixture meets the needs of scores of industrial applications calling for high levels of illumination. Available in 4, 5, and 8-foot lengths, with V-type crosswise shielding or 45 x 45° louvers. Also may be equipped with the new T-17 low-brightness lamps for critical seeing tasks such as the machining of specular metals.

Find out how this improved fixture can improve your plant lighting and save you real money in maintenance. For full details address Dept. 4X-5204, Sylvania today.

SYLVANIA

Sylvania Electric Products Inc., 1740 Broadway, New York 19, N. Y.

In Canada: Sylvania Electric (Canada) Ltd., University Tower Building, St. Catherine St., Montreal, P. Q.

LIGHTING · RADIO · ELECTRONICS · TELEVISION

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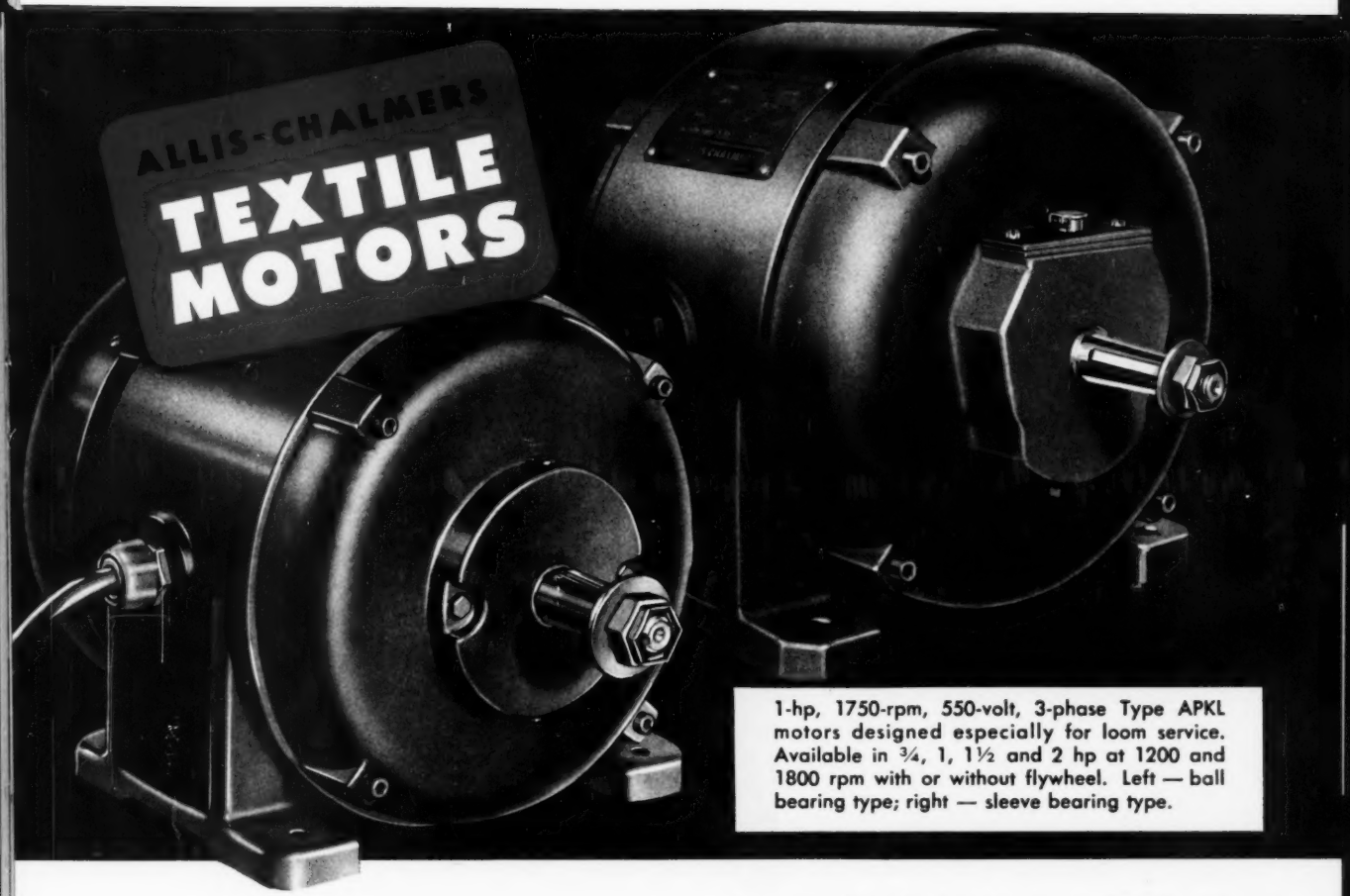


1-hp, 1750-rpm, 550-volt, 3-phase Type APKL motors designed especially for loom service. Available in ¾, 1, 1½ and 2 hp at 1200 and 1800 rpm with or without flywheel. Left — ball bearing type; right — sleeve bearing type.

NEW LOOM MOTOR

Exhaustive tests prove this motor sets new electrical and mechanical standards. Mill operators get lower maintenance and longer life because of: low temperature rise . . . large rotor inertia . . . large bearings . . . small speed pulsation.

Research to solve motor problems caused by rapid cycling of high speed looms has resulted in this new Allis-Chalmers motor.

The rotor has been made extra heavy and in the largest possible diameter to provide maximum flywheel effect (WK^2) to meet the new and greater demands on loom motors from the higher and higher loom speeds of the past few years. Under some conditions a flywheel is mounted on the motor shaft to provide still more WK^2.

This motor is available with oversize greasable ball bearings, or sleeve bearings packed with wool waste to keep oil in place. In case of over-oiling in the latter type, provision is made for excess oil to drain to the outside, thus preventing damage to windings.

Get Complete Details

While this Allis-Chalmers loom motor is a completely new design from top to bottom, it has been in actual use in quantity for over a year. Get all the details on what this motor can do for your loom operation from your nearby Allis-Chalmers District Office. Or write Allis-Chalmers, Milwaukee 1, Wisconsin and ask for Bulletin 51B7111.

Matched Allis-Chalmers Loom Switch
Specially built for starting loom motors. Designed to fit the starting requirements of the new Allis-Chalmers loom motor. Buy the easy, economical way. Get the complete power unit — both motor and starter — from one reliable source, Allis-Chalmers.

A-4297

ALLIS-CHALMERS

get the motor dirt and lint can't stop!

There's no motor problem caused by lint-laden atmospheres that can't be solved using *Quick-Clean* textile motors.

Powerful fans sweep lint and dirt through wide open air passages — and right out of the motor.

Sealed and pre-lubricated double width, single row, ball bearings are an important feature of the *Quick-Clean* motor. They will operate for long periods without attention of any kind. When motor is dismantled, they may then be cleaned and repacked. Inside face of bearing is protected from lint by a collar pressed onto motor shaft.

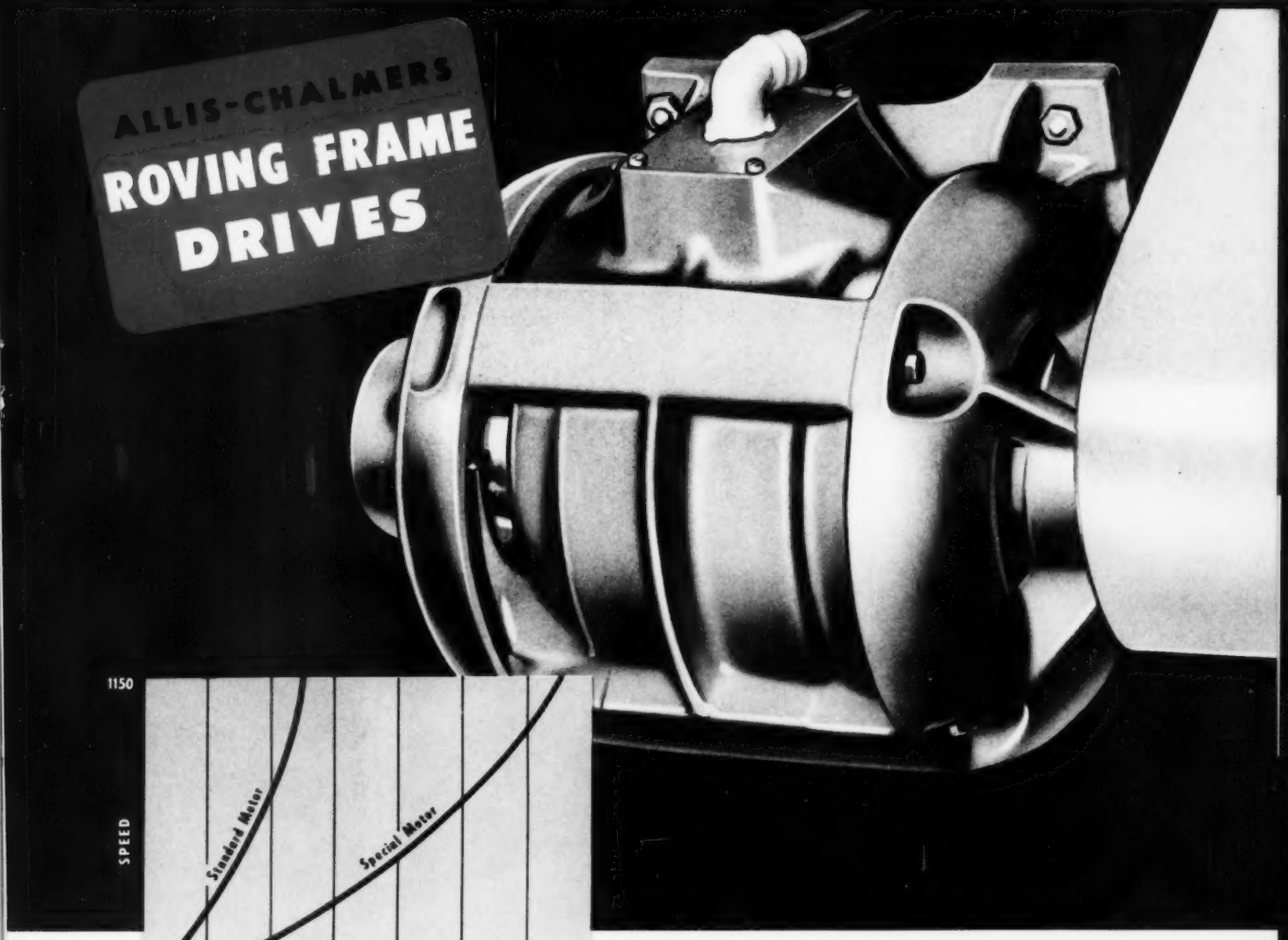
In addition Allis-Chalmers can supply control and *Texrope* V-belt drives to meet complete machine drive needs.

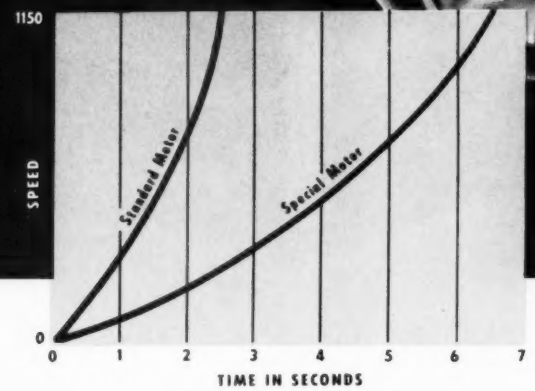
For complete information ask your Allis-Chalmers distributor, or district office representative.

ALLIS-

ALLIS-CHALMERS

ROVING FRAME DRIVES





slow starts, fine jogging —without special control

Slow, smooth acceleration, using Allis-Chalmers roving frame motor, reduces ends down, helps produce uniform roving. No special resistors — no acceleration reducing clutches — no special control is required.

Slow, smooth acceleration of motor (almost three times as long as a standard motor) provides e-v-e-n tension on the roving during starting periods. Special conduit box connections permit relatively high torque when required, such as during "break-in" period of the frame.

Quick-Clean frame design allows powerful fans to sweep lint and dirt in and out with the cooling air.

In addition Allis-Chalmers can supply control and *Texrope* V-belt drives to meet complete machine drive needs.

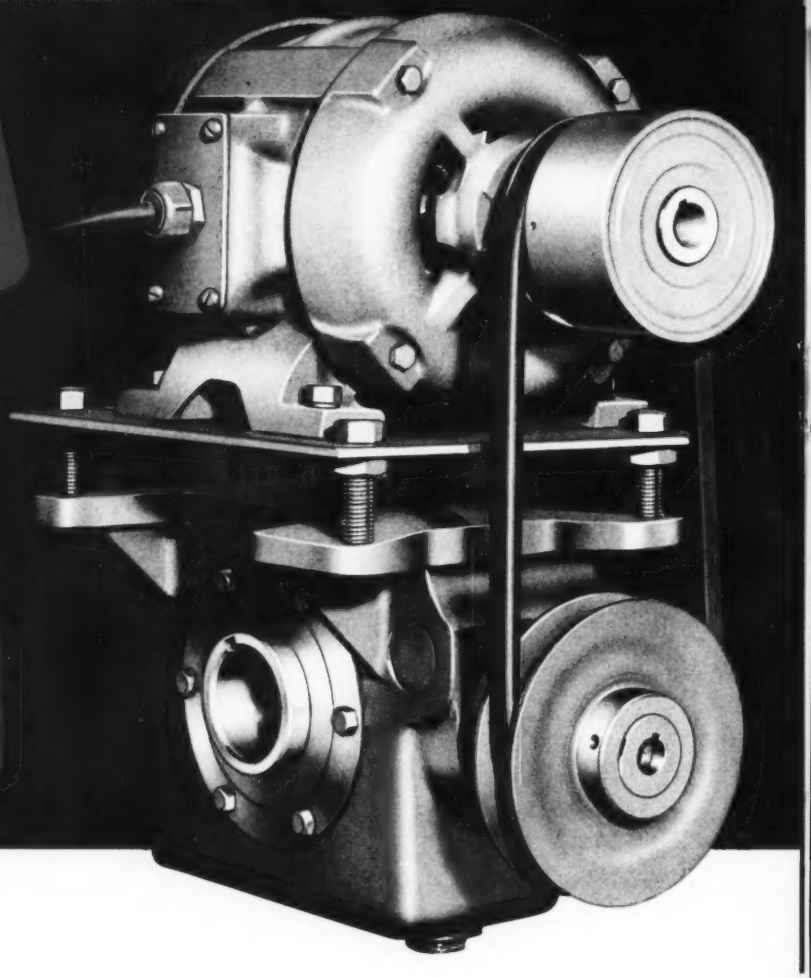
Call your Allis-Chalmers distributor or district office. Or, write Allis-Chalmers, Milwaukee 1, Wisconsin.

CHALMERS

A-C ALLIS-CHALMERS

ALLIS-CHALMERS

CARD DRIVES



Quick-Clean motor drives gear reducer through *Texrope* V-belt drive and centrifugal clutch.

make your card room safer, cleaner, lighter

Today's trend is to individual card drives. Overhead line shafting creates problems in lighting, cleanliness and safety that are only solved by individual drives. In addition, usual duct arrangements for air conditioning are difficult with the overhead drive.

Allis-Chalmers combines a *Quick-Clean* motor, *Texrope* drive and highly efficient gear reducer to make a compact, reasonably priced power package for cards.

There's no need to move cards to install this drive. Unit requires practically same floor space as tight-and-loose pulley drive. It is mounted directly on card shaft — independent of the card arch — with torque arm to keep the gear box from rotating. No strain on card arch to cause vibration or distortion of air gap between flats and main cylinder.

Cuts maintenance, too! No heavy, expensive belts to replace . . . no periodic belt dressing. In addition, drive is practically vibrationless, increasing life of card and making it easier to keep in adjustment. There's also a special reversing starter for this drive to permit grinding the clothing. Get details from your nearby A-C district office or distributor, or write Allis-Chalmers, Milwaukee 1, Wisconsin for Bulletin 51B7867.

Quick-Clean and *Texrope* are Allis-Chalmers trademarks.

ALLIS-CHALMERS

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NET

You see *our*

Textile Machines at the

Technical Fair Hanover

25 April-4 May 1954

HALL 7A

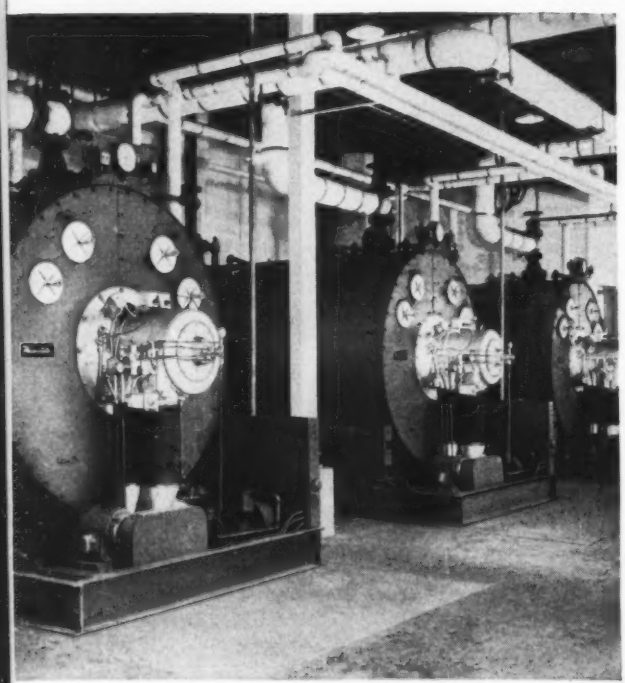
UNIONMATEX *Textilmaschinen-Union, G.m.b.H.*

Frankfurt/Main

 For more information, write direct or use Reader Service post card.

New.. Powermaster® exclusive....

Now . . . for the *first time* you can get packaged boiler units in the wide range of capacities from 15 to 500 HP, with *complete interchangeability of fuels* . . . light or heavy fuel oil—natural or manufactured gas—or combination gas and oil . . . and you get this cost-saving advantage *only* with *Powermaster* Packaged Automatic Boilers. Find out more about this new, wide-range service today from your *Powermaster* representative. He will help you with recommendations and suggestions for selecting the most economical units to supply steam or hot water requirements in any kind of service—industrial plants, institutions, public buildings, schools, laundries, apartment houses, hospitals, dairies, motels, and shopping centers.



- Complete Fuel Flexibility: Light or Heavy Oil, Any Gas or Combination Oil and Gas.
- Choice of:
  Air Atomizing VORIFLOW Oil Burner —Pre-Mix VORIFLOW Gas Burner— Combination VORIFLOW Oil and Gas Burner—All Designed and Built by O & S.
- Full-Range Modulation with VORIFLOW Combustion.
- All Middle-Range and Large Capacities.
- Selection of Automatic Operating and Safety Controls.
- Instant Change from Fuel to Fuel.

Model 3 *Powermaster*—Experienced-proved to be the standard of industry. These three 350 HP units are supplying process steam at pressures up to 200 psi.

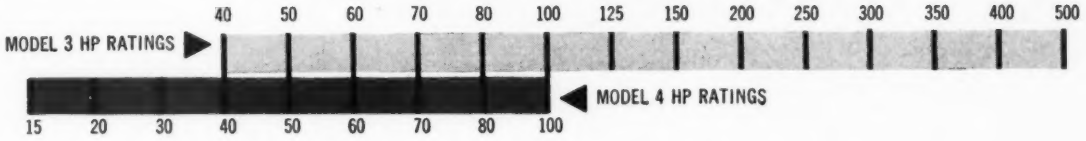
Send for bulletins describing Model 3 and Model 4 *Powermaster* units.

ORR & SEMBOWER, INC.
READING, PA.
BUILDING DEPENDABLE BOILERS SINCE 1885

. . a choice of 2

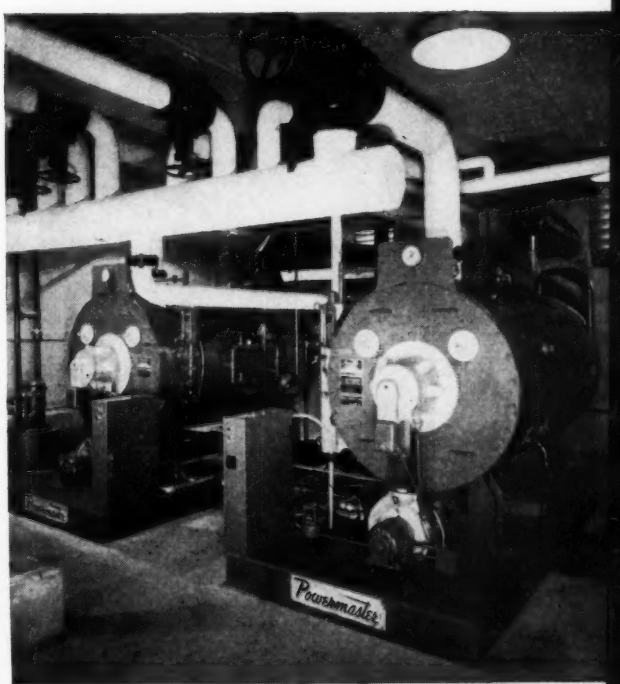
Powermaster Packaged Automatic Boilers to meet your specific operating requirements . . . to your best advantage.

for 15 to 250 psi. steam or hot water



- Choice of Fuels:
  Light Distillate—Natural Gas—Manufactured Gas—Combination Oil and Gas.
- Choice of:
  Mechanical Pressure Atomizing Oil Burner—Pre-Mix Gas Burner—Combination Oil and Gas Burner—All Designed and Built by O & S.
- On-Off and Low-Fire Start Burners.
- Small and Popular Middle-Range Capacities.
- Selection of Automatic Operating and Safety Controls.
- Quick Change from Fuel to Fuel.

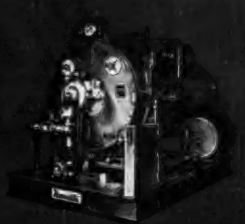
Model 4 *Powermaster*—Already service-proved in wide variety of successful applications. This installation of 40 HP units supplies 15 psi. steam for heating.



O&S

Powermaster®

PACKAGED AUTOMATIC BOILERS



Carpenter

TUBING ELIMINATED 5 REAL HEADACHES!

These skein winding swifts in a southern textile mill used to be made of wooden slats bolted to cast iron "heads". But they caused plenty of production headaches.

1. Due to their weight they stretched the thread more than was desirable and this affected the quality of the cloth.
2. The wooden slats warped "out of true" causing uneven tension on some of the ends. This carried through to the loom unless an intermediate rewinding was arranged.
3. The wooden slats often splintered and picked up the thread which wrapped around the slats. This caused a shutdown, loss in production, and labor costs.
4. The wooden slats picked up linters which were carried through to the looms causing imperfections and rejections.
5. The wooden slats were hard to clean.

With the change to Carpenter tubing the problems disappeared. The assemblies are now appreciably lighter . . . stainless tubing can't warp or splinter . . . and it's much easier to keep clean.

Perhaps Carpenter Stainless Tubing can help you to reduce costs, improve quality, or speed production. Just call your nearby Carpenter distributor . . . he'll be glad to work with you on any problem.

The Carpenter Steel Company, Alloy Tube Division, Union, N.J.
Export Dept.: The Carpenter Steel Co., Port Washington, N.Y.
"CARSTEELCO"

Carpenter

STAINLESS TUBING & PIPE

- guaranteed on every shipment

A WOOLEN MANUFACTURER
ASKED FOR:

Bright violet checks

The dyehouse delivered a perfect job,
thanks to a new Sandoz dyestuff development

Problem:

Recently a high-grade woolen manufacturer wanted to put out a fabric with bright violet checks. The problem was that the fast-to-light violets then available did not have sufficient fastness to fulling, and would stain the white checks, while the fast-to-fulling violets did not have sufficient fastness to light.

Solution: a new Sandoz dyestuff

The problem was solved by Sandoz' timely announcement of Brilliant Alizarine Milling Violet FBL Pat. This is the first violet dyestuff which possesses the required brightness of shade, along with both fastness to light and fastness to fulling. In addition to these properties, it also has excellent fastness to carbonizing, decatizing, crocking, salt water, perspiration, and washing.

Brilliant Alizarine Milling Violet FBL Pat. is the newest of several fast-to-light colors which Sandoz has pioneered. By combining them with Brilliant Alizarine Milling Blue BL Pat., Blue 2RL Pat., Blue FGL Pat., or Brilliant Alizarine Milling Red FBL Pat., it is now possible to produce violets in any shade or depth with excellent fastness properties.

. . .

If you are faced with the problem of obtaining a special shade or fastness for any fabric, natural or synthetic, Sandoz Technical Service may be able to help you solve it.

Write to your nearest Sandoz branch office in Hudson, Mass.; Providence; Fairlawn, N. J.; Philadelphia; Charlotte; Cincinnati; Los Angeles; Montreal; Toronto. Sandoz Chemical Works, Inc., 61 Van Dam Street, New York 13, N.Y.

SAN·DOZ

SANDOZ

THINKS AHEAD WITH TEXTILES

Volume buyers of SURFACE ACTIVE AGENTS!

it will pay you to investigate

ORONITE ALKANE

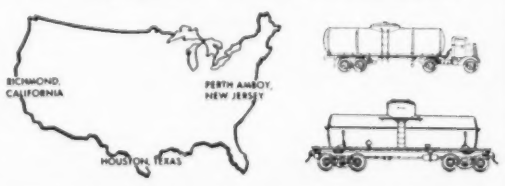
the basic raw material used in making a variety of detergents and wetting agents

If you are a large user or seller of surface active materials, it will pay you to talk over sulfonation with us. It could be more profitable for you to start with the base raw material, Oronite Alkane, and produce your own surface active agents.

1. Oronite Alkane is the principal and basic material used in sulfonating a great variety of the highest quality synthetic detergents and wetting agents. Because Oronite is the world's largest producer of synthetic detergent raw materials, we can offer you assured supply on consistently high quality Alkane.

2. We have the experience, *plus* engineering and manufacturing specialists to accurately estimate your complete needs for sulfonation. Plant designs, equipment needs and prices, performance data, yields — everything you need to know. You may find the sulfonating process a lot less costly than you think. Why not talk it over? Write or phone the Oronite office nearest you and we will have a detergent engineer contact you.

Oronite Alkane is available from three centrally located bulk storage terminals. Tank car or tank truck delivery.



OTHER ORONITE DETERGENT PRODUCTS

Detergent Slurry • Detergent D-40 • Detergent D-60
Dispersant NI-W • Dispersant NI-O • Wetting Agents

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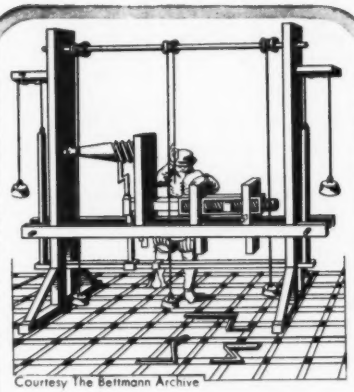
2874

Are these 5 speed-thieves stealing your profits?



Courtesy The Bettmann Archive

Recognize it?

It's a screw lathe—1565 version. A clever arrangement of cords and pulleys made it unusually versatile. By using pulleys of different diameters the operator could cut screws of any desired pitch. The same kind of inventiveness that produced this early example of power transmission developed modern, precision equipment like these American Adjustable-Speed Drives.

Most mill men agree that a speed variation of as little as 1% may mean the difference between profit and loss in the textile industry. Yet these five conditions can cause a speed variation up to 11%.

1. Most induction motor speeds are guaranteed only to within 2% of rated speeds, fully loaded.

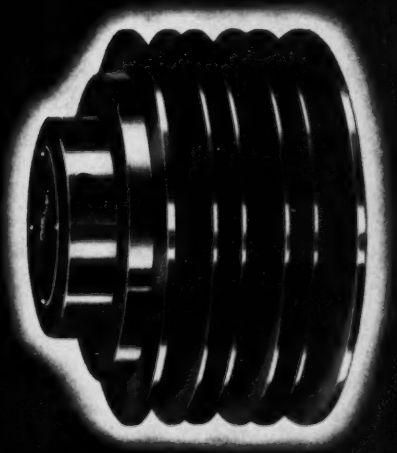
2. Average speed variation from belt creep is approximately 1%.

3. Speed losses on V-drives of 4-1 ratio can be as high as 4% from the calculated speed due to changes in the pitch line of the belt under full load.

4. Average speed loss from belt slip is 2% even with properly engineered drives.

5. Actual pitch line of a V-belt and its mating sheaves can vary from the theoretical pitch line enough to cause a speed change up to 2%.

Stop these speed-thieves by using American Adjustable-Speed Drives. And remember that American Adjustable-Speed Drives are recognized as the most proficient and economical method of adjusting the speed of textile machinery to the best speed for any process. See your distributor or write for full details. No obligation. The American Pulley Company, 4226 Wissahickon Ave., Philadelphia 29, Pa.



AMERICAN ADJUSTABLE—SPEED SHEAVES with patented, double-taper construction. Split tapered hubs produce powerful wedge grip on shaft. Expanding tapered sleeve locks flanges tight, makes adjustments easy. Entire unit dynamically balanced for smooth operation.

At the PROFIT end of the machine

Power Transmission by

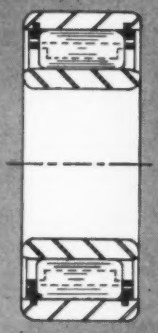
AMERICAN

PULLEY COMPANY

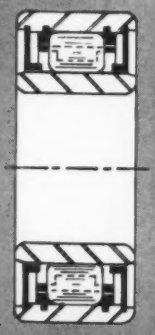
The Hit of European Fairs now available in the U. S.!—Watch our Napper

How Rollway Bearing *Adaptability* Can Cut Your Costs

Rollway's Adaptability Solves Sealing Problem



Question was raised on textile machine bearing installation: "Can oil seal be incorporated *without increasing bearing width?*"



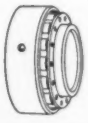
Solution: Standard narrower retainer with rollers of sufficient load capacity substituted — providing space for inner and outer oil seals. Standard width outer race readily machined for snap ring and sealing ring grooves.

Lint. Load. Over-load. Torque. Temperature. Space. Speed. You name the textile bearing requirement; Rollway can meet it.

In fact, there's almost no limit to the number of factors Rollway Bearings are now adapted to — or can be adapted to.

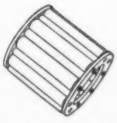
Using adaptations of sizes and types, Rollway engineers can often design bearings for out-of-the-ordinary applications. And, since all components involved are standard production items, such installation can be made at little or no extra cost.

Rollway engineers will be glad to help you in your efforts to lower your bearing costs. *Isn't it worth a try?* No charge, no obligation — simply write, phone or send prints. Rollway Bearing Co., Inc., Syracuse 4, New York.



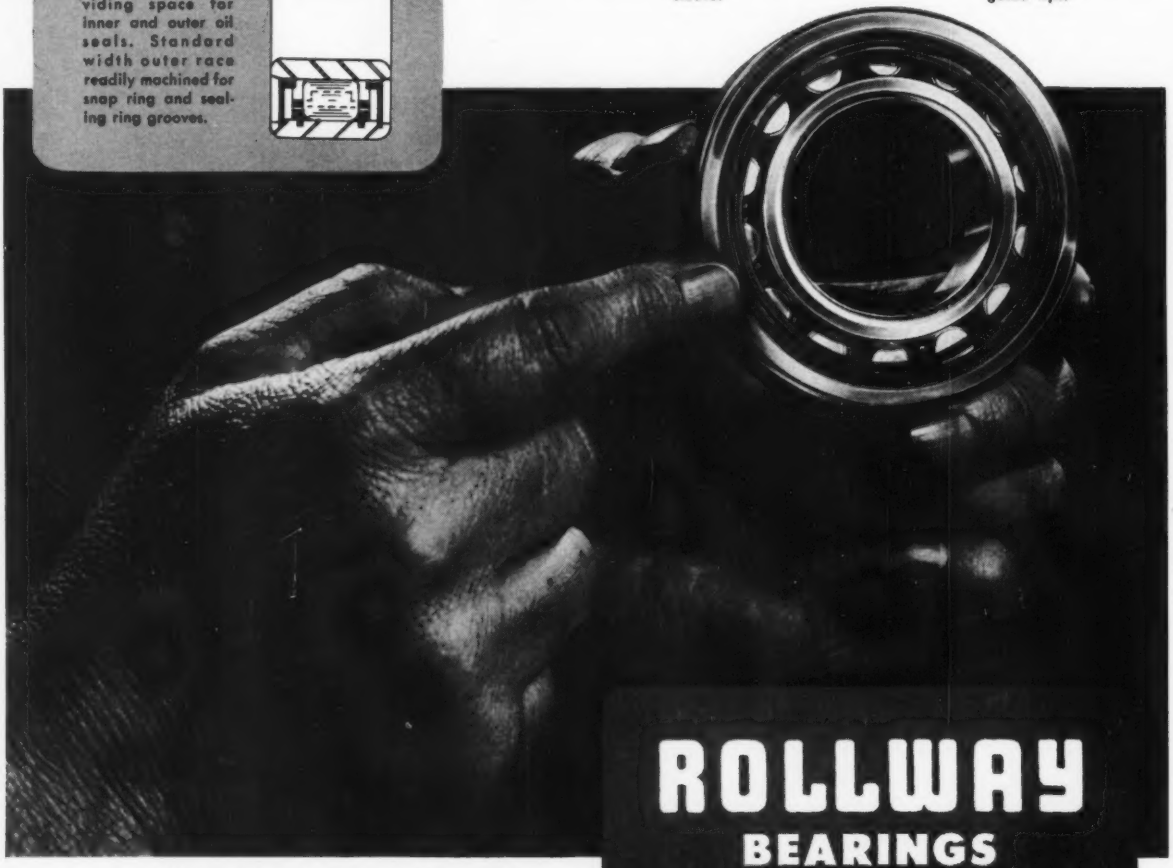
Steel cage, metric series—solid races.

Steel cage, inch series — planished sleeve.



Steel cage, inch series — no races.

Steel cage, heavy duty — contoured guide lips.



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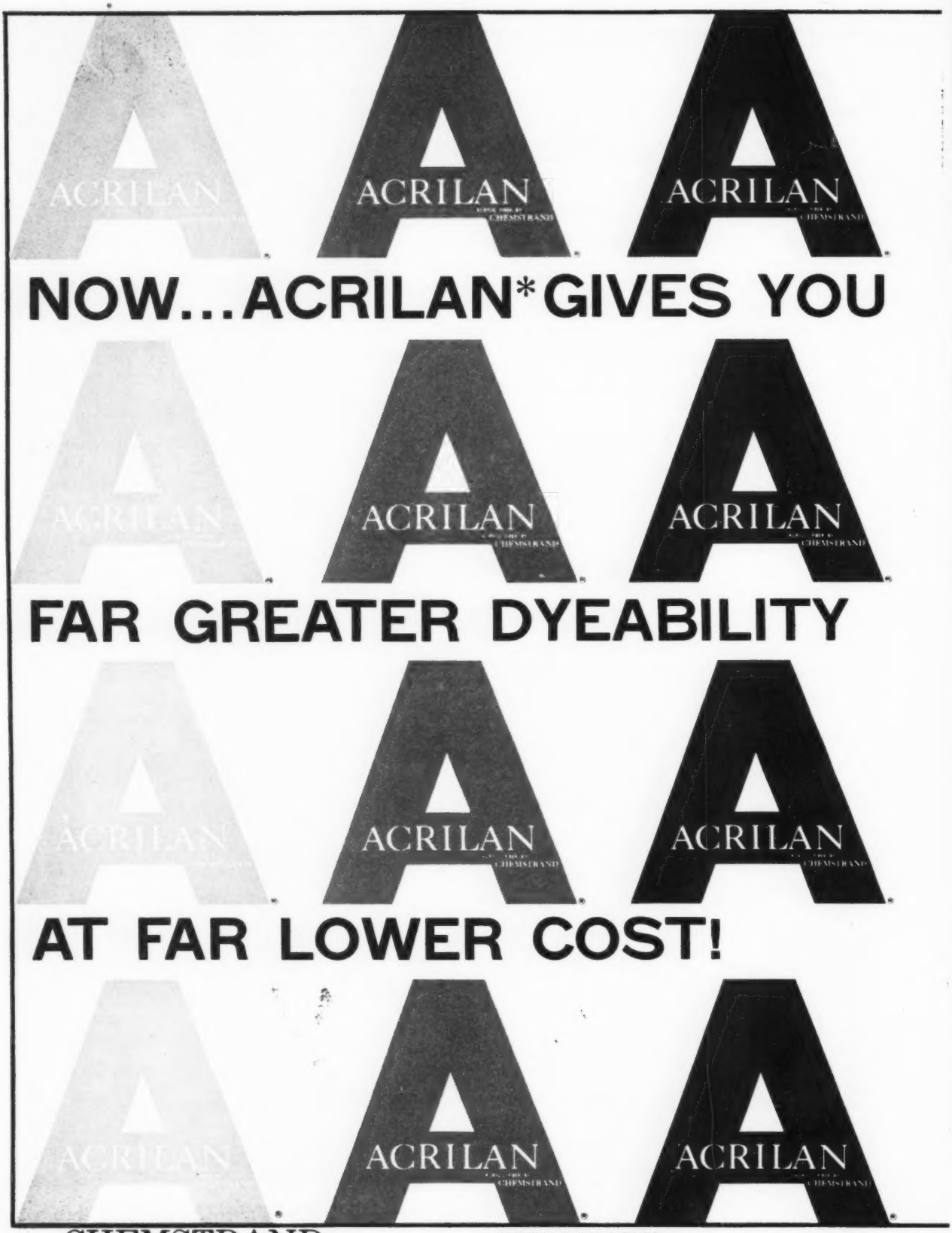

THE CHEMSTRAND CORPORATION

GENERAL SALES OFFICES:
350 FIFTH AVENUE, NEW YORK 1, NEW YORK

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It's welcome news . . . when you can find an acrylic fiber that gives you dyeability as flexible, as easily controlled, yet as *economical* as this! But it's no surprise. For Chemstrand has spent months engineering improvements into Acrilan that make it more useable, more economical, and more profitable right down the line.

A greater selection of dyestuffs. Acrilan can be dyed to a wider range of colors—with a greater selection of *dyestuffs.* You'll be able to use dispersed neutrals . . . a broad scale of standard acid dyes . . . acetates where you want to achieve brilliant colors . . . and, for greater wash-and-light fastness, pre-metalized, metalized, chrome and even vat dyes. This flexibility means, too, that you'll be able to use more of your own normal dyeing resources.

You enjoy greater ease of application. Acrilan permits a substantial reduction in dye temperatures. In addition, no expensive carriers or specialized pressure equipment are necessary, because Acrilan can be dyed with standard commercial machinery, using standard techniques.

And Acrilan offers you FAR GREATER ECONOMY. In the first place, it spends much less time in the dye-beck. Second: reduced dyeing temperatures mean greatly reduced steam costs. And finally, because Acrilan requires a lower concentration of dyestuffs, you get one more important saving: lower dyestuff costs.

Acrilan offers you other advantages as well. It has *greater extensibility,* which means higher spin limits, smoother mill processing, fabrics with greater abrasion-resistance and crease-retention. It has a *more luxurious touch.* And Acrilan keeps *all its original performance plusses:* its high dimensional stability, unusual bulking properties, warmth without weight, outstanding resistance to moths, mildew, heat and chemicals, pleat-and press-retention and freedom from pilling. Take advantage now of Acrilan's exciting new properties!

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CenTraVac water chiller cuts

gives completely automatic

Starts, stops, runs automatically . . . adjusts to varying cooling requirements with power savings in almost direct proportion to load requirements . . . and is the only compressor that permits stable operation over such a wide range—from 100% down to 10% of capacity.

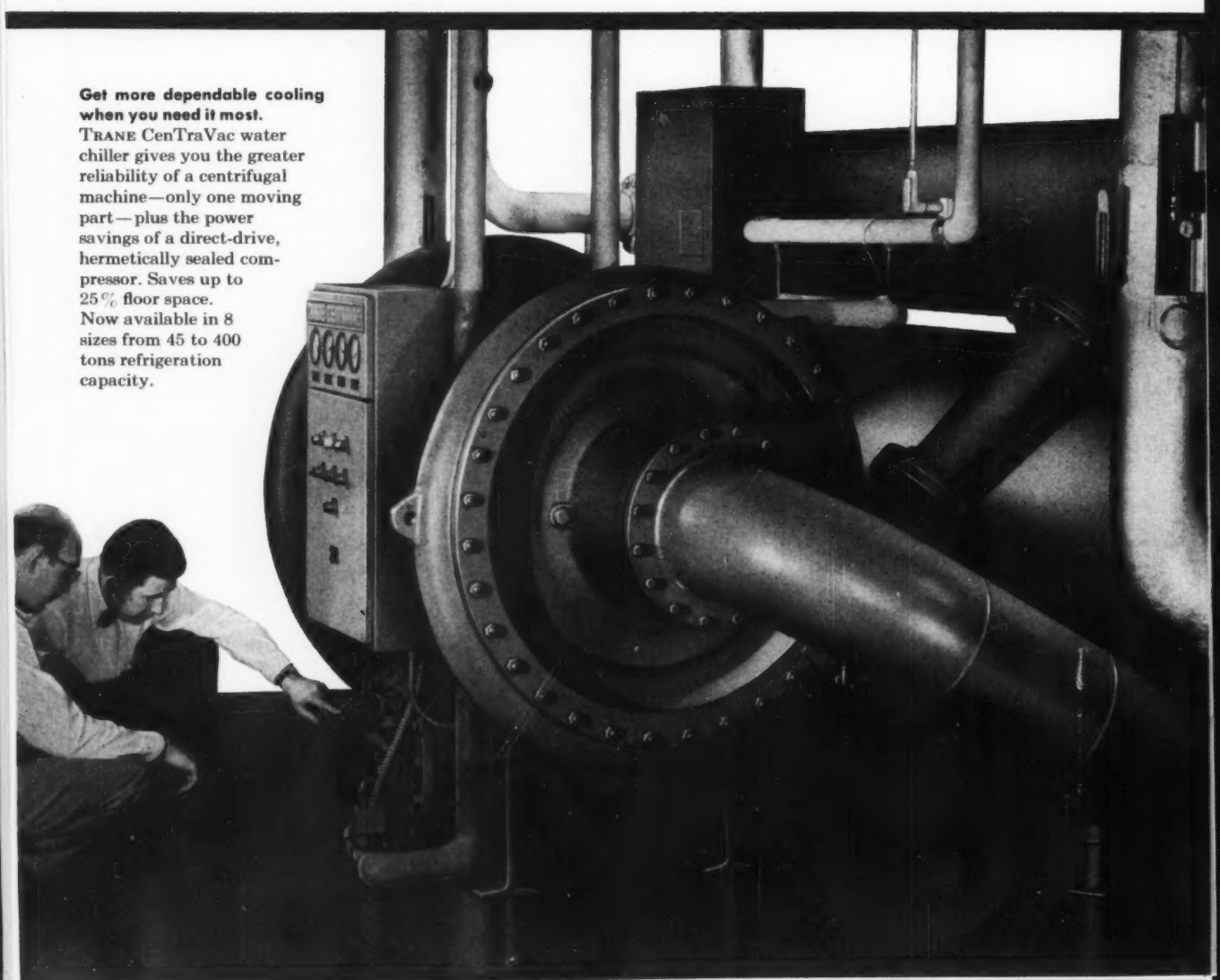
Cuts power costs 3 ways! 1. CenTraVac automatically matches power input to cooling load—adjusts to any load condition from 100% to 10% of capacity. *Cuts power costs as much as 8%* over cooling season, compared with 4-step capacity-control compressor. **2.** Motor and compressor hermetically sealed, eliminates power-wasting gear box, *saves up to 10% power.* **3.** In addition, an economizer, optional on larger units, *saves up to 10% power.*

Runs unattended! CenTraVac is completely automatic—frees attendant for other duties. Interlocked controls provide additional safety.

Eliminates costly Freon leakage! True hermetic compressor is airtight—all working parts inside—no shaft seals to leak Freon. *CenTraVac Freon charge guaranteed for one year!*

Less maintenance! CenTraVac has only *one* major moving part—only *two* pressure lubricated bearings. No shaft seal to

Get more dependable cooling when you need it most. TRANE CenTraVac water chiller gives you the greater reliability of a centrifugal machine—only one moving part—plus the power savings of a direct-drive, hermetically sealed compressor. Saves up to 25% floor space. Now available in 8 sizes from 45 to 400 tons refrigeration capacity.



air conditioning costs...

operation...runs unattended!

worry about. Infinite modulation from 100% down to 10% of capacity eliminates frequent starts and stops—reduces wear—adds to life.

Cuts installation cost up to $800! CenTraVac needs no expensive base that can cost up to $800. Can be installed in 48 working hours. Shipped in three pieces to simplify rigging and installation.

Quieter—almost no vibration! You can balance a dime on CenTraVac housing while it's run at full load, stopped and started.

Stable performance helps boost production! Chilled water temperature accurately maintained—keeps air conditioning system at design conditions for peak performance of men, machines and materials.

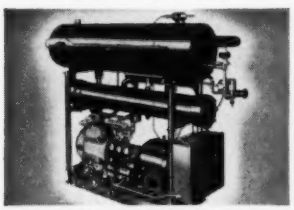
Wider range of sizes! CenTraVacs now in sizes from 45 to 400 tons capacity. Multi-unit installation can be made to facilitate zoning—or meet any load requirement. No need to order oversize unit to meet in-between load. Selection of proper size eliminates power-wasting surging!

Well known textile firms which have purchased CenTraVacs: Bossong Hosiery Mills, Asheboro, N.C.; Cone Mills Laboratory, Greensboro, N.C.; Haynsworth Mill, Anderson, S.C.; Highland Park Mfg. Co., Charlotte, N.C.; Stone Mfg. Co., Greenville, S.C.; Woodside Mills, Simpsonville, S.C.

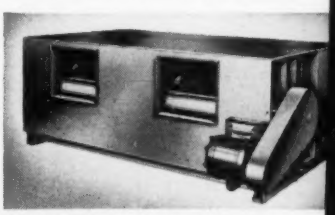
Only the Trane CenTraVac Has These Features!

1. Most modern centrifugal compressor in the industry . . . the *only* hermetic centrifugal.
2. True hermetic design with all working parts inside. Does away with gear box, shaft seal, chilled water reservoir and variable speed motor.
3. Automatically matches capacity to load smoothly from 100% down to 10% of capacity. Saves power.
4. Only *one* major moving part. Simple design cuts maintenance.
5. Capacity control achieved by variable inlet vanes to both stages of compressor. Tests prove vanes superior to dampers.

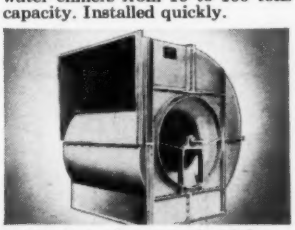
A complete line of air conditioning, heating and ventilating products



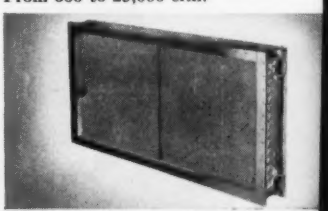
TRANE Cold Generators, packaged water chillers from 10 to 100 tons capacity. Installed quickly.



TRANE Climate Changers are complete, factory-built air handlers. From 600 to 29,000 cfm.



TRANE Fans for any size job are more efficient, have lower bhp requirement. From 688 to 491,760 cfm capacity.



TRANE Coils for heating and air conditioning have mechanical fin-tube bond, and high heat transfer efficiency.

one source • one responsibility

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for reliable, lower cost air conditioning

MANUFACTURING ENGINEERS OF AIR CONDITIONING, HEATING, VENTILATING AND HEAT TRANSFER EQUIPMENT

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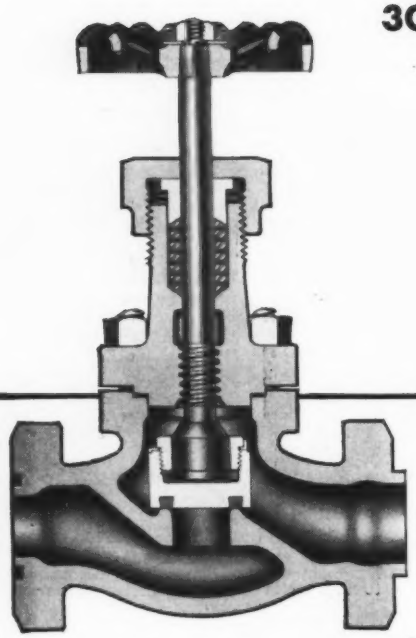
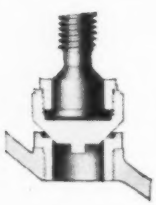
Put these Crane valves to the test—use them for ammonia, air, oil, gas, caustic solutions, chlorinated compounds, alcohols—for chemicals and process work. Their rugged bodies of Ferrosteel (35% stronger than cast iron)... their precision seating designs... the unusually deep stuffing box and high-grade packing... the sweeping interior body contours... assure the safety and lasting service you want.

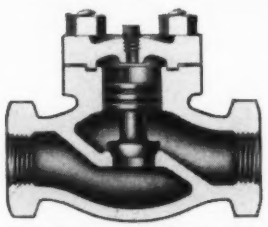
The line includes *bolted bonnet* globes and angles with choice of disc, *union bonnet* globes and angles with plug-type disc, lift checks, expansion valves, relief valves, liquid gauges—and all the fittings, flanges, return bends and other specialties for a complete Crane Quality installation. Check with your Crane man.



Cross-section bolted bonnet Globe, with flanged ends and special lead-faced disc. Sizes ¼ to 4-inch.



Bolted bonnet Globes also available with steel disc and seat where high temperatures or corrosion prohibit use of lead.



Cross-section, Lift Check with bolted cap, and cushioned disc action which increases valve life. Sizes ½ to 2-inch.

New 6-page folder AD1977 catalogs this complete Crane line. Write direct, or ask your Crane Representative.

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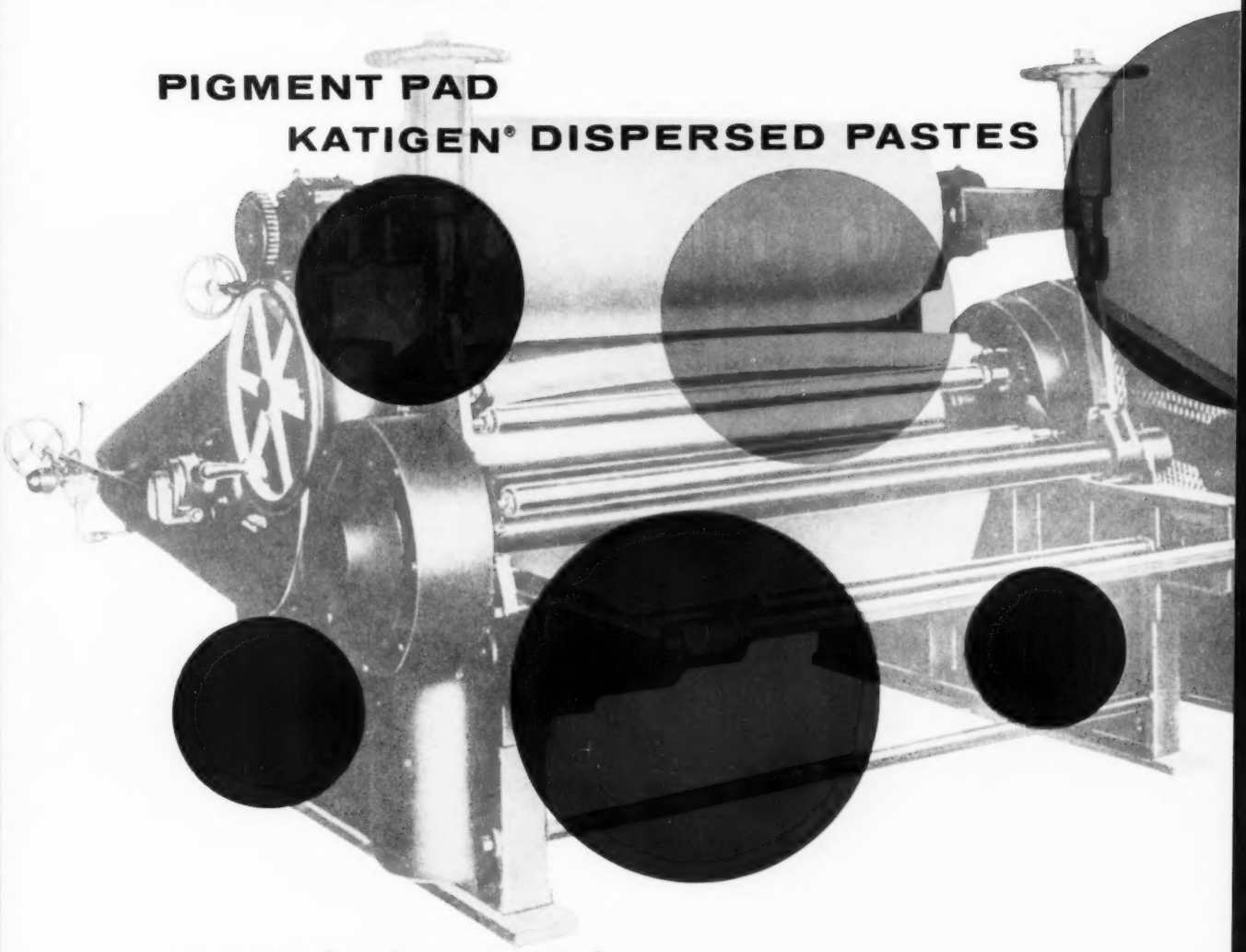

Our new Katigen dispersed pastes now permit results not formerly obtainable with sulfur colors in any other physical form. Their use brings to sulfur dyeing all the advantages the pigment padding method of application has for vat dyestuffs.

Among these advantages are—

Complete elimination of exhaust in padding. Easier application and control of dyestuff. Better penetration of tightly woven fabrics. Less side to center shading—better selvages. Better wet fastness and crock fastness.

Application on rayon fabrics may be done by the Genray Process.

Our representatives are prepared to offer complete technical information on the use of this important new group of sulfur dyes.

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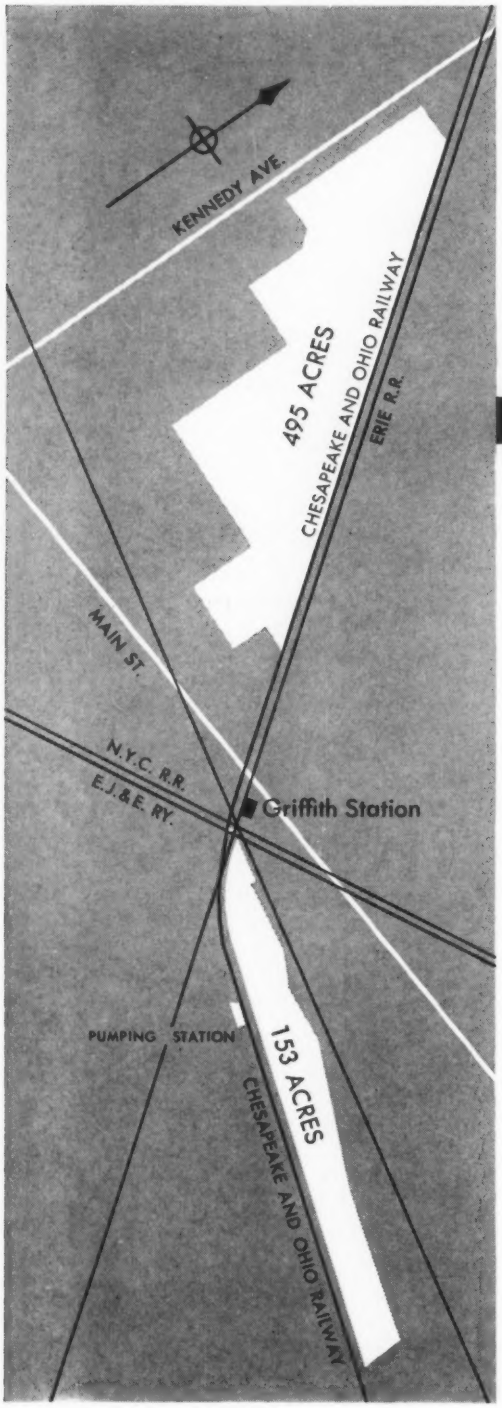


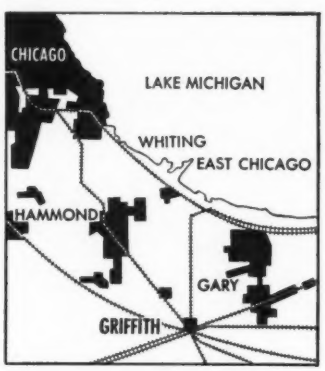
Why not go where the labor is?

From the chiefly residential town of Griffith, Ind., hundreds of industrial workers commute daily to Hammond, Gary, East Chicago and Whiting. Many of these people have moved out to the Griffith area to get away from the congestion and less pleasant living conditions in these older industrial centers. Undoubtedly these workers would welcome jobs closer to their homes.

In addition to its favorable labor situation, Griffith offers exceptional transportation advantages. It is the junction point for five railroads — Chesapeake and Ohio, Erie, New York Central, Grand Trunk and Elgin, Joliet and Eastern (Chicago Outer Belt Line).

The C&O owns a 153-acre strip of land running southeast along its tracks for nearly two miles which would be suitable for industrial development. Just across the tracks from this is a group of wells, pumping station and softening plant which is available for anyone who needs a supply of conditioned water. There are several other potential sites north of Griffith and in nearby Highland, some of which are also shown on the map.

Give us your requirements and we will prepare a special Pin-Point Survey for you on this or other sites that meet your particular needs. Address: Chesapeake and Ohio Railway, Industrial Development Department, Cleveland 1, Ohio, Detroit 2, Mich., or Huntington 1, W. Va.



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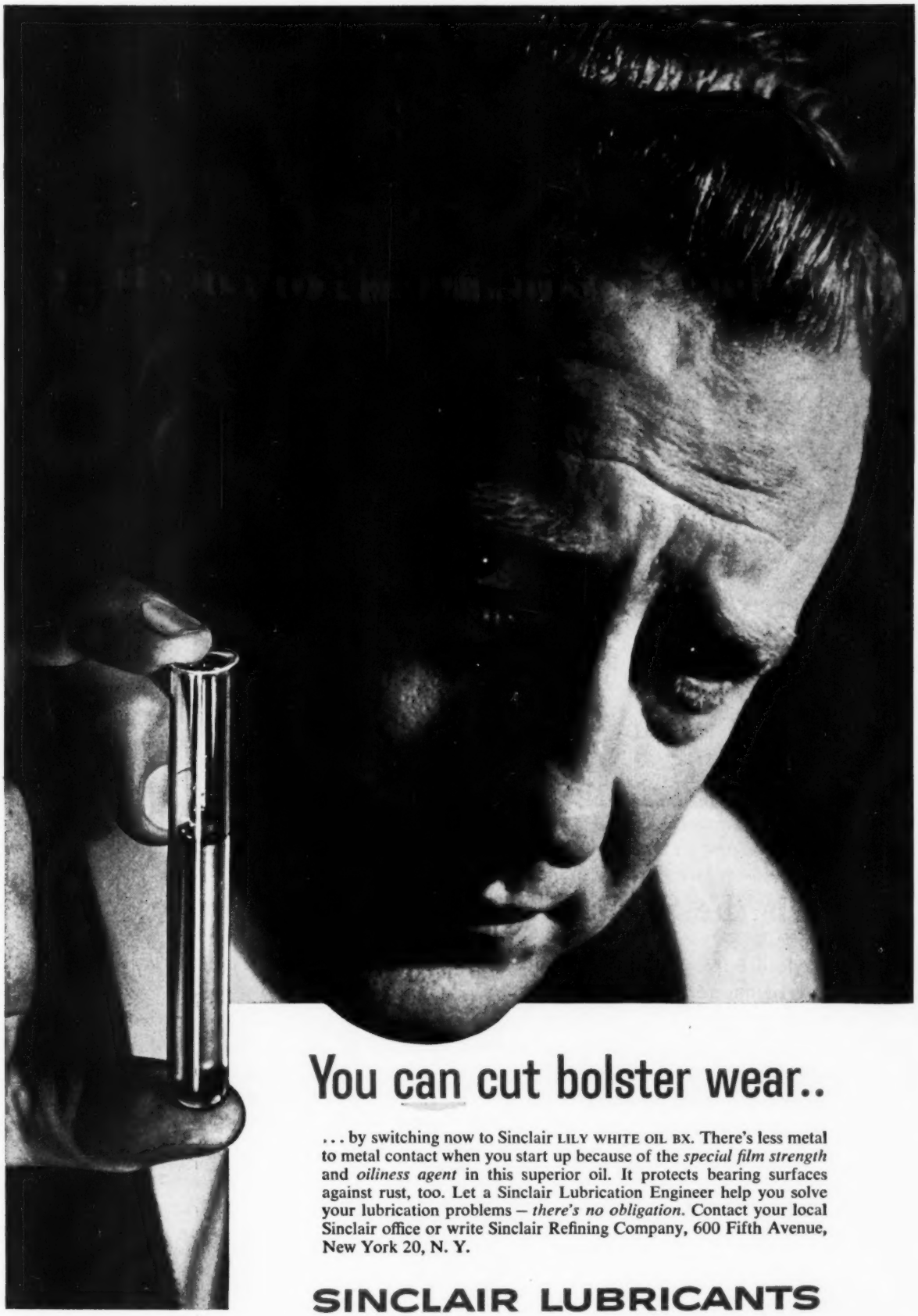

You can cut bolster wear..

. . . by switching now to Sinclair LILY WHITE OIL BX. There's less metal to metal contact when you start up because of the *special film strength* and *oiliness agent* in this superior oil. It protects bearing surfaces against rust, too. Let a Sinclair Lubrication Engineer help you solve your lubrication problems – *there's no obligation.* Contact your local Sinclair office or write Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

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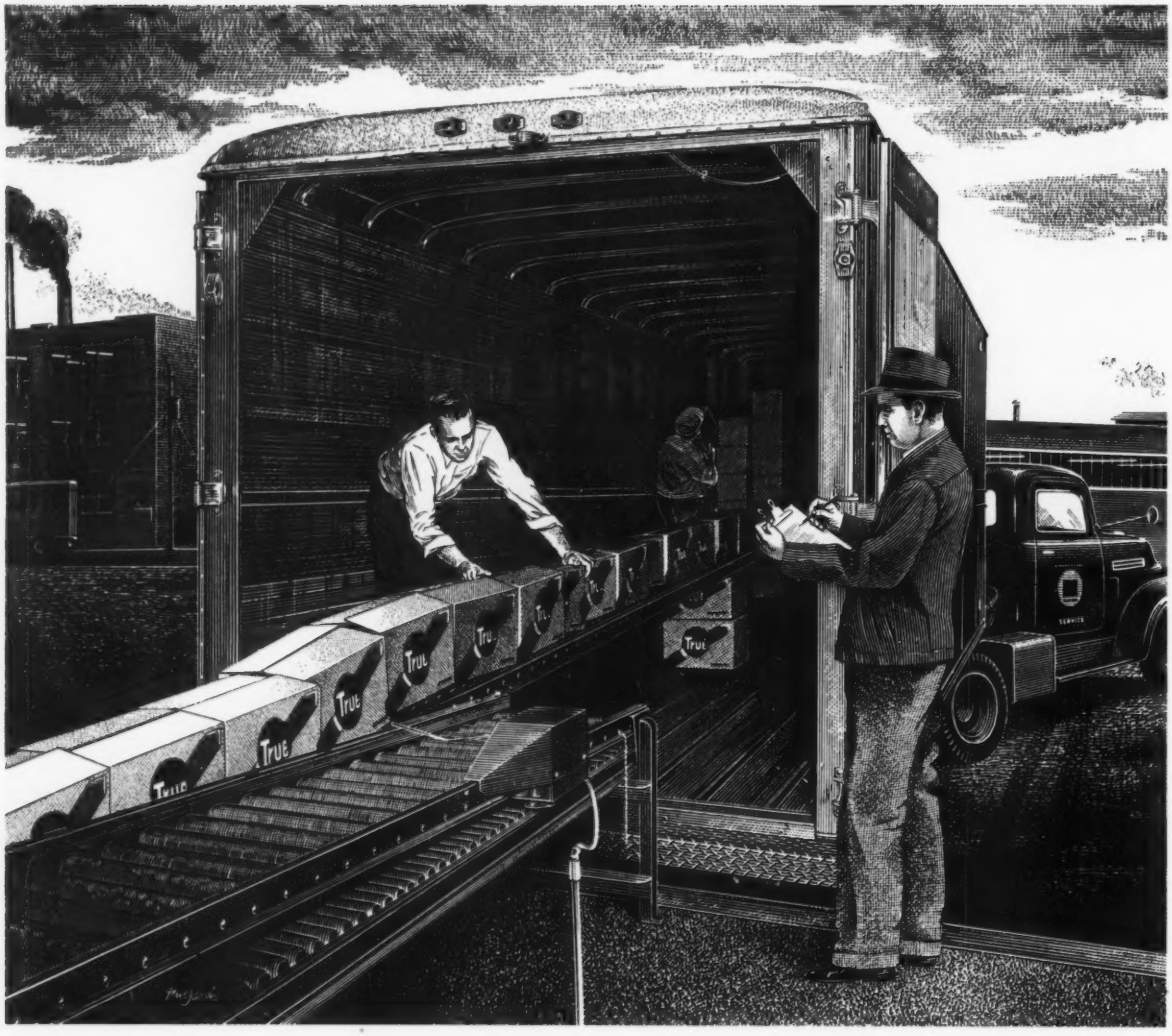

Babying Your Products is the Special Talent of Gaylord Boxes

Gaylord Boxes cradle your product in *safety* from packing line to the end of the trip.

This positive protection is a natural result of Gaylord's specialized approach to container engineering. Successful experience and tireless ingenuity combine to produce quality boxes that are exactly suited to your particular packing needs.

Many of America's leading manufacturers have learned to depend on Gaylord Boxes. How about you? For information and co-operation, phone your nearby Gaylord office. It's listed in your phone book.

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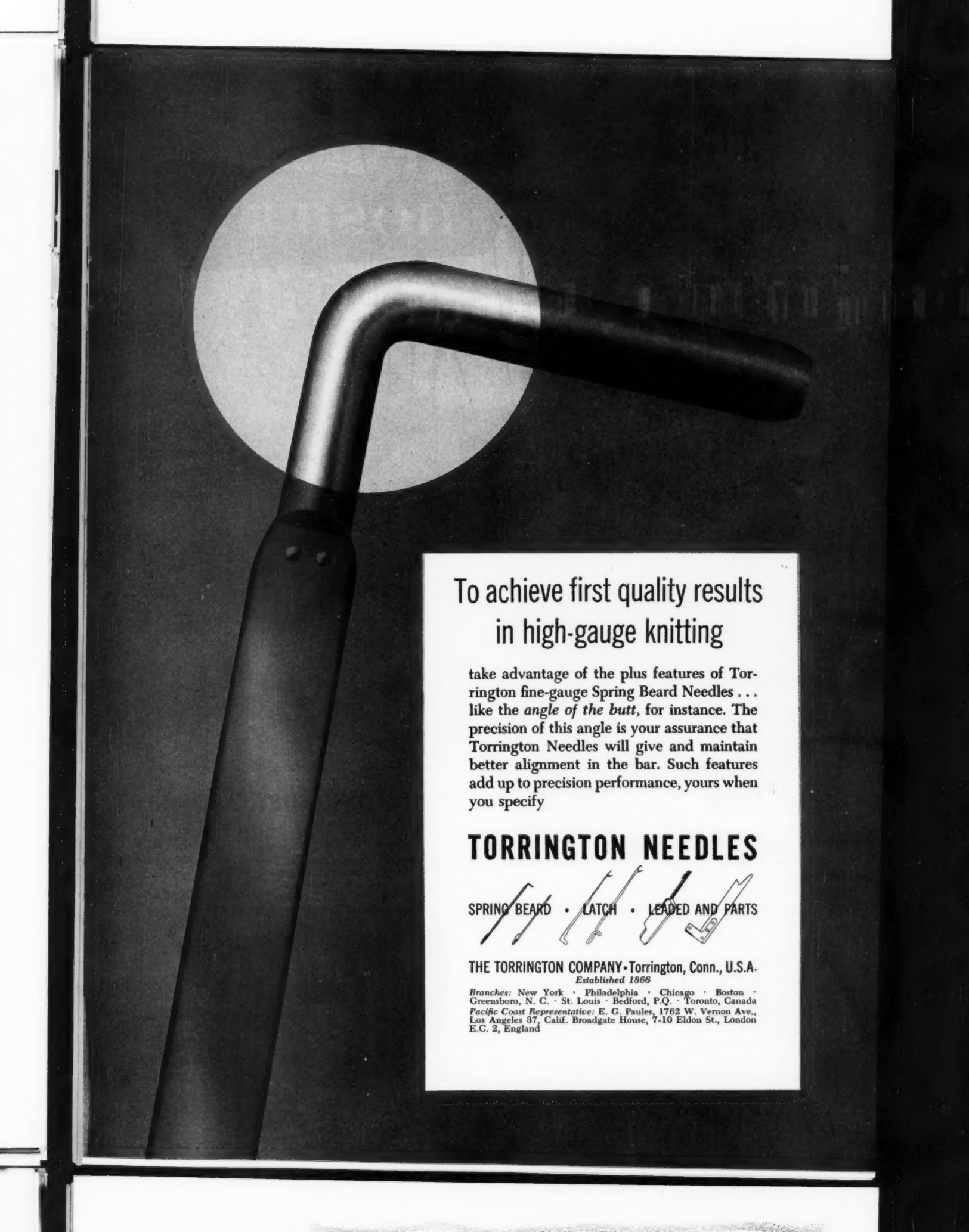

To achieve first quality results in high-gauge knitting

take advantage of the plus features of Torrington fine-gauge Spring Beard Needles . . . like the *angle of the butt*, for instance. The precision of this angle is your assurance that Torrington Needles will give and maintain better alignment in the bar. Such features add up to precision performance, yours when you specify

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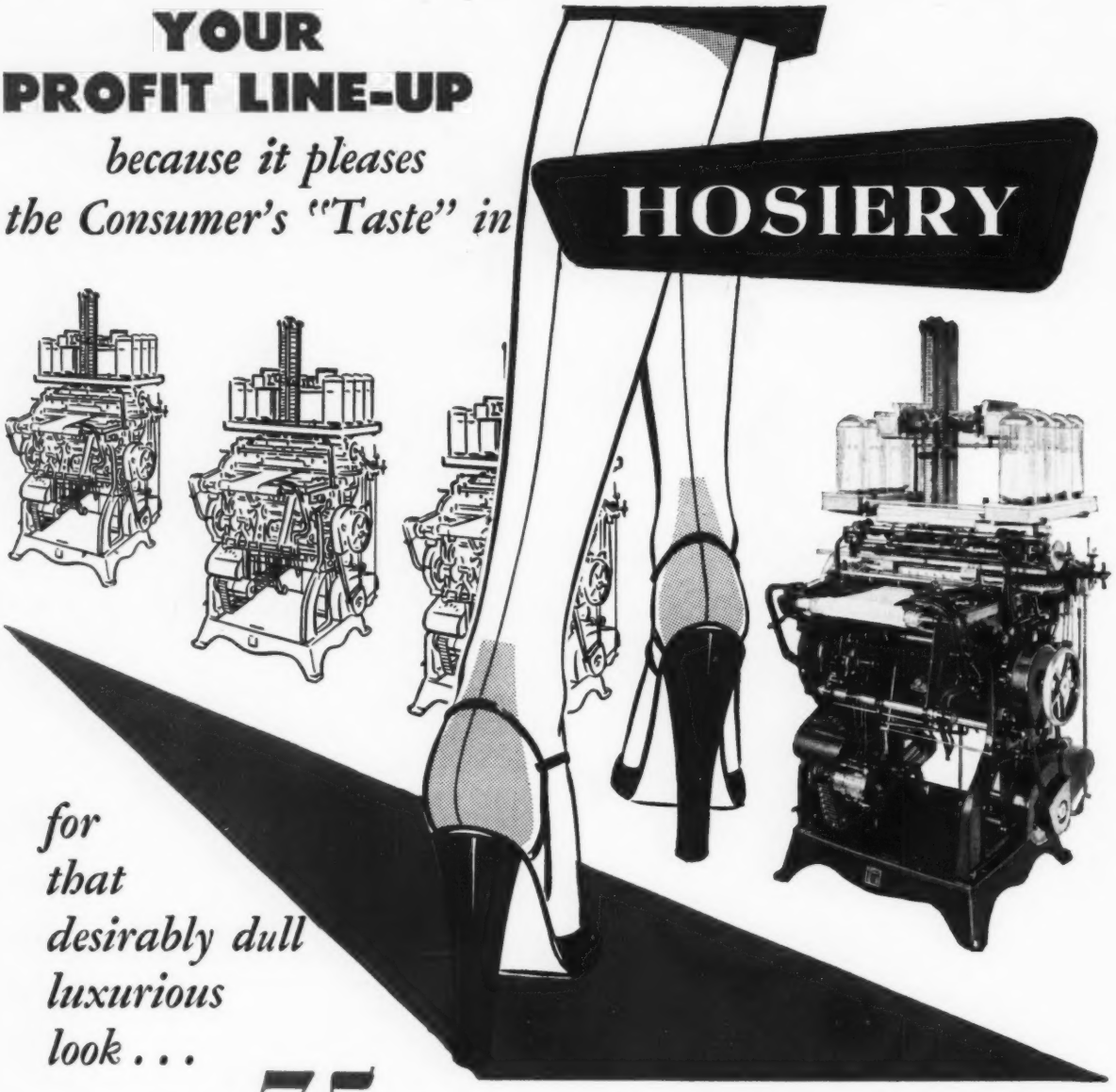
YOUR PROFIT LINE-UP

because it pleases the Consumer's "Taste" in

HOSIERY



for that desirably dull luxurious look . . .

THE WILDMAN 75 GAUGE FULL FASHIONED HOSIERY MACHINE

IN THE HIGH GAUGE HOSIERY MARKETS . . . Hosiery machines that have proved their ability to maintain consistent high quality in production are a must in your profit-planning picture.

The WILDMAN 75, used by alert marketers, assures you, as have all WILDMAN hosiery machines, of a high-production, economical, efficient, automatic-in-operation production line . . . When hosiery is made on this machine the consumer will want to re-order your 75 gauge hosiery, because she will know she is buying uniformity in the highest elasticity. YOU will produce with maximum efficiency the tighter stitch that resists snagging; and you'll have a better wearing 12 denier stocking to sell, made on the WILDMAN 75 than on coarser gauge machines.

HIGHER HOSIERY PROFITS for you, when you use the WILDMAN 75 . . . Inquire today for complete details.

WILDMAN

MFG. CO., NORRISTOWN, PA.

MANUFACTURERS OF: FULL FASHIONED HOSIERY MACHINES; CIRCULAR MACHINES FOR OUTERWEAR, UNDERWEAR, SPORTSWEAR, TRIMMINGS; STOP MOTIONS

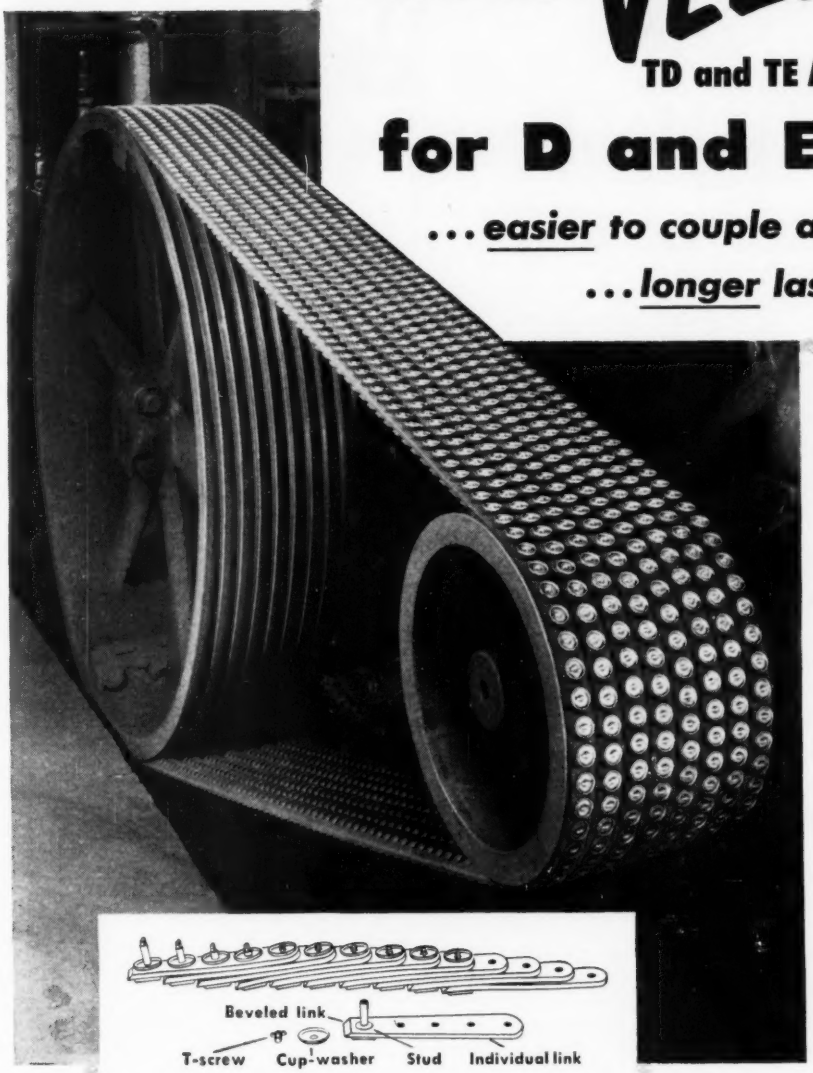
NEW VEELOS

TD and TE Adjustable V-belts

for D and E Drives

...easier to couple and uncouple

...longer lasting



This detailed line drawing of the new Veelos TD and TE v-belt makes it easy to see how this new v-belt is designed to do a better job... easier!

Now get the v-belt that's been especially developed for D and E drives—the new, patented Veelos TD and TE adjustable v-belt!

This new Veelos has advantages unmatched by any other v-belt. It is *installed quickly* without removing the outboard bearings found on most D and E drives. It is the easiest v-belt to couple and uncouple ever developed. Cup-washers and T-screws join links together to form individual belts of any length. Veelos TD and TE *lasts longer* because new high-tensile strength links plus the new stud, cup-washer and T-screw design give *added strength* —combines this added strength with *maximum flexibility* for cooler, smoother running.

Install this new Veelos TD and TE v-belt on your D and E drives. Prove to yourself why there's no v-belt that can match the performance, the efficiency and the economy of Veelos TD and TE.

Get the complete story of this great new v-belt for D and E drives. Send the coupon now for new 8-page illustrated catalog.

VEELOS
THE LINK
V-BELT

Veelos is known as Veelink outside the United States.

T1

MANHEIM MANUFACTURING & BELTING CO.
611 Manbel St., Manheim, Pa.

Please send copy of your new Veelos TD and TE v-belt catalog.

Name.....

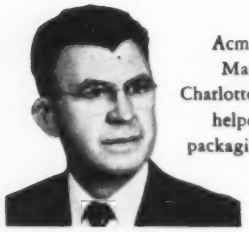
Company.....

Address.....

.....

ADJUSTABLE TO ANY LENGTH • ADAPTABLE TO ANY DRIVE

AIM* for INCREASED packaging productivity with Acme Steel Strapping Ideas



Acme Idea Man, Mark Brown of Charlotte, N. C., has helped solve this packaging problem.

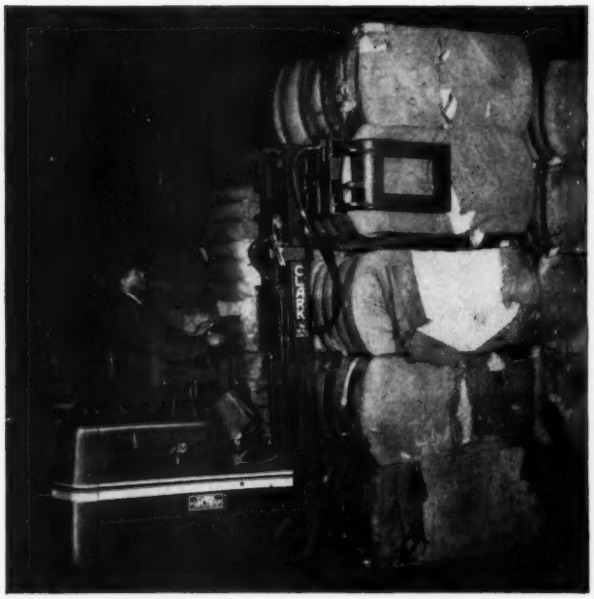
ask your
*Acme Idea Man
to help solve your
problems

Acme Steel Strapping Idea #402 for securing tire fabric helps keep shipments at Firestone Textiles, Gastonia, N. C., abreast of continuous production schedules. The bulky rolls of tire cord fabric, five feet long and up to 36" in diameter, are covered with burlap and then firmly bound with steel strapping. Acme Steel Strapping, as used in this one operation, makes it possible for two men to package ten to twelve 1300-pound rolls an hour. This application of Acme Steel's strapping methods and tools at Firestone reduces materials handling and shipping costs and makes sure merchandise will arrive undamaged.

Your Acme Steel Idea Man is a specialist in all problems involving materials handling. He's always ready to help save time and money in your shipping and packaging operations. Call him —or write Acme Steel Products Division, Dept. TW-EE-44, Acme Steel Company, 2840 Archer Avenue, Chicago 8, Illinois.

AIM *For Safe, Lower-Cost Shipping*

ACME STEEL



Your Clark dealer's TEXTILE KNOW-HOW will help you cut costs!

With wide-spread cotton clamp, this 2000-lb. "Clipper" tiers to the rafters—conserves valuable storage space. Clark manufactures both gas and electric lift trucks —capacities 1000 to 26,000 lbs.

Fast, efficient horizontal transportation—a "Clarkat" tows a train of 9 individual bale trailers (designed by a Clark dealer). Clark produces a complete line of tractors with a wide range of capacities.

In addition to providing the right machines for economical handling, your local franchised Clark dealer is experienced in solving textile handling problems. Without obligation, you can ask him to analyze your own operations—point out ways for you to cut costs. Your local Clark dealer also provides *service*—preventive maintenance service to keep your handling equipment operating at peak efficiency. Why not call him today —materials handling is his business.

The "break-out clamp," a telescopic boom attachment, permits you to operate in narrow aisles, reach otherwise inaccessible material. The Clark line of textile-handling attachments is complete.

CLARK EQUIPMENT

Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 27, Michigan

Take Your Pick

OF THESE HIGH POTENCY STARCH OR PROTEIN DIGESTANTS

Amprozyme Liquid

For quick and efficient removal of normal textile sizes such as starch, dextrine, etc. Amprozyme Liquid is suitable for use with any type equipment (pad, jig, beck), or in continuous method after singeing. Amprozyme Liquid is adapted for high temperature desizing.

Protozyme Liquid

High potency proteolytic enzyme for fast removal of protein sizes or deposits—glue, gelatin, albumin, etc.

JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.

Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.

We will be happy to send you complete details and samples of either one, or both, of these products. There is no obligation.

blankets...

VISQUEEN protects from dust and dirt—won't puncture easily—doesn't tear, split, shatter or run. Increases display life.

towels...

VISQUEEN doesn't get brittle, won't curl, break or dry out under case lights. Outlasts the product it protects. Eliminates soilage.

sheets...

VISQUEEN "C", the polyethylene created for permanent ink adhesion, not only protects, but solves the problem of printing on poly. Costs no more.

no other film packages textiles as well as

VISQUEEN® film

Converters of VISQUEEN film are ready to help you to package better.
Mail coupon for names of those who serve your territory.

VisQueen® film...a product of
THE VISKING CORPORATION
World's largest producers of polyethylene sheeting and tubing
Plastics Division, Terre Haute, Indiana
In Canada: VISKING Limited, Lindsay, Ontario
In England: British VISQUEEN Limited, London

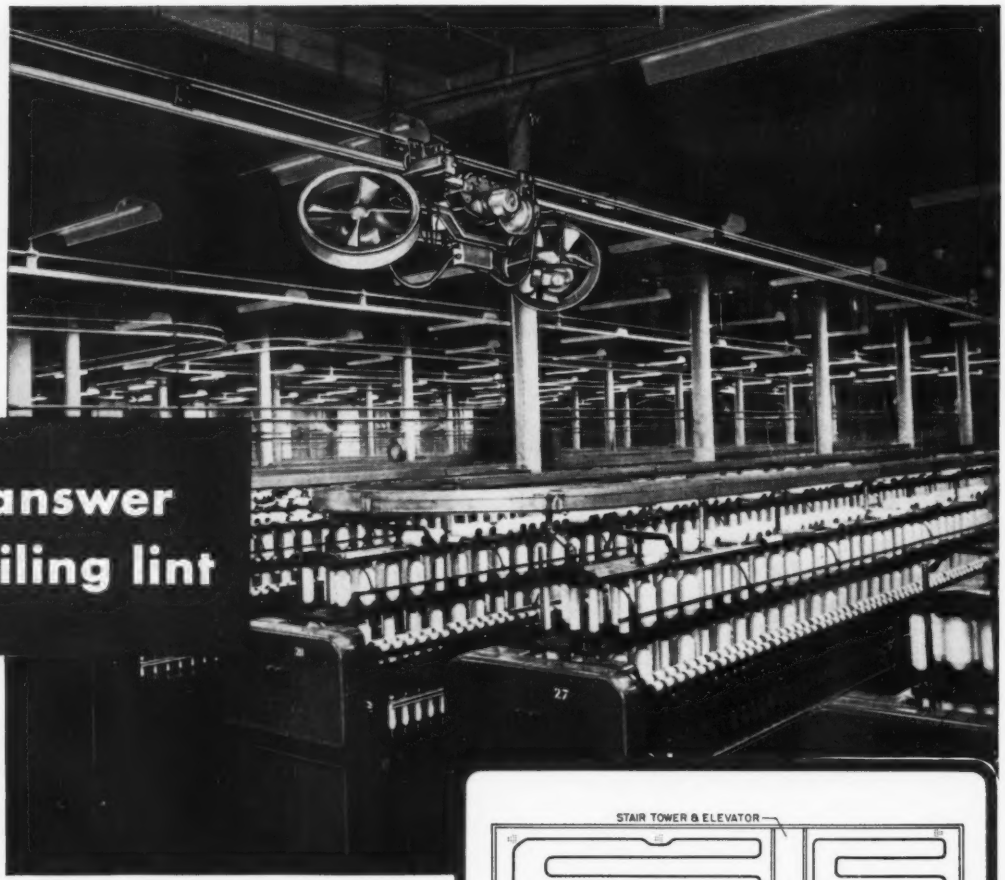
Important: VISQUEEN film is all polyethylene, but not all polyethylene is VISQUEEN. VISQUEEN film is produced by process of U. S. Patents No. 2461975 and 2632206. Only VISQUEEN has the benefit of research and technical experience of The VISKING Corporation, pioneers in the development of pure polyethylene film.

THE VISKING CORPORATION, BOX TW4-1410, Plastics Division, Terre Haute, Indiana

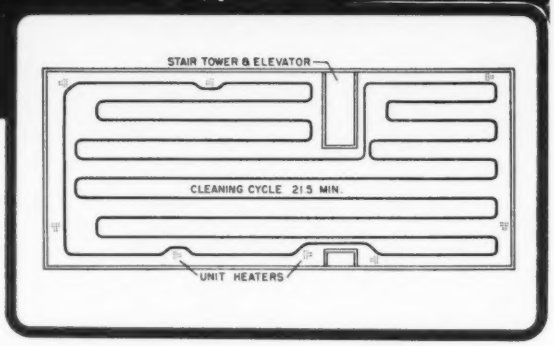
Send me names of converters of VISQUEEN film serving my area.

Name_____ Company_____

Address_____ City_____ Zone____ State_____



The answer to ceiling lint



Louden's Automatic Twin-Fan ceiling cleaner

More and more mills now keep their ceilings *continuously* clean and free of lint—by installing the Louden Twin-Fan Cleaner that cleans without disturbance to any processes going on in the machines below it.

The installation pictured above is typical. This is a spinning room in a well-known southern mill. The room is "blanketed" by 2800 feet of Louden track over which the Louden twin-fan—hence, *two directional*—ceiling cleaner travels continuously, making the trip once every 22 minutes.

The twin fans sweep on *both* sides of the track at once. Independently adjustable, each fan can be pointed in any direction, to suit the special needs of your room. They clean both sides of ceiling beams and other surfaces. The threat of "gout" or "slubs" is done away with, together with manual blowing down, or ladder climbing to adjust stationary fans. There are no dead air pockets, humidity is even throughout. You can have features such as automatic shut off and turn on for passage through areas where fan blowing is not wanted.

You can be sure of highest dependability, efficiency and economy because this is a product of Louden's long experience in designing and building overhead track and overhead equipment of every type.

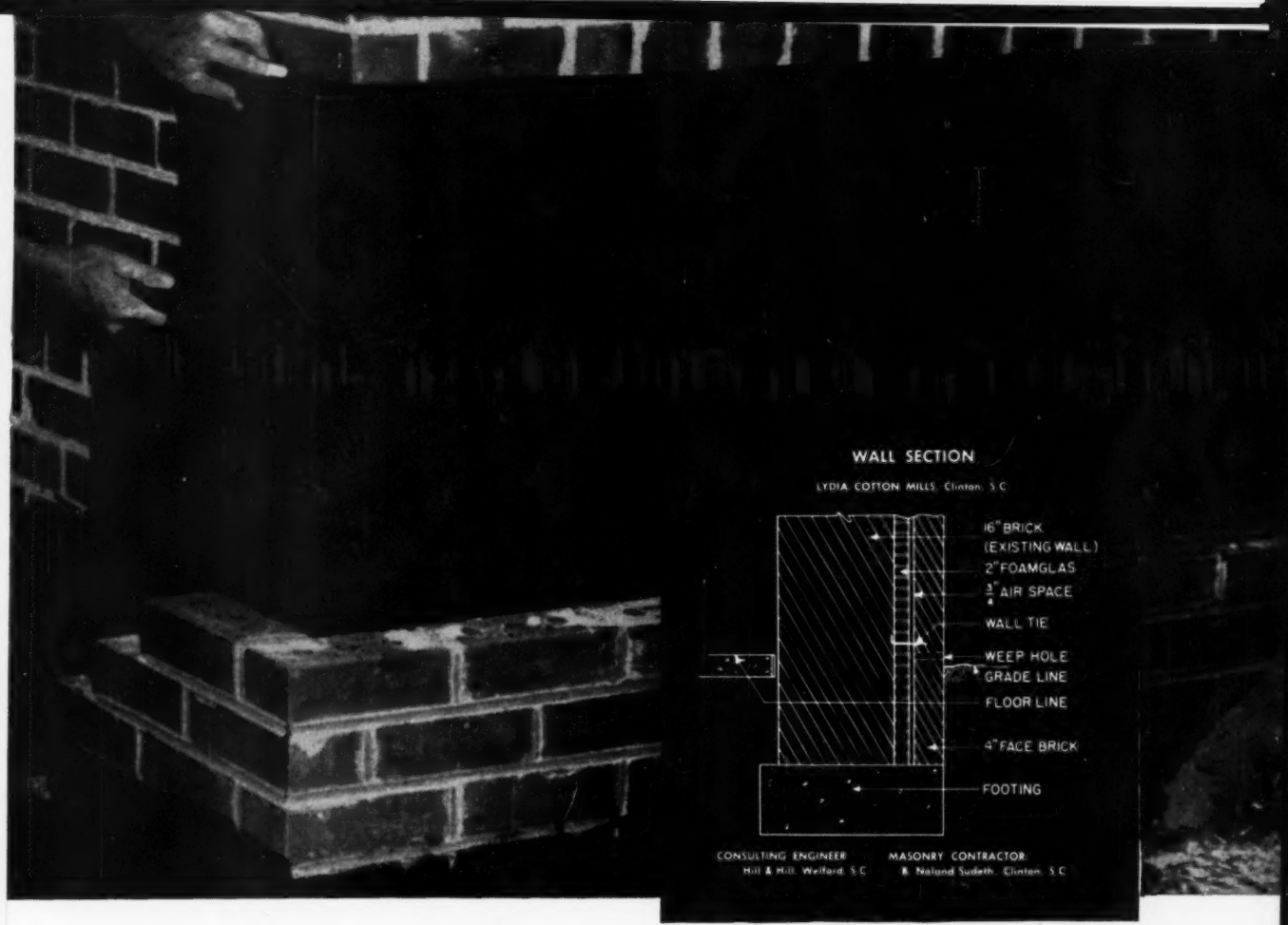
Let a Louden engineering representative tell you what you need, and how much it will cost, what it will save. Write now, before you forget.

THE LOUDEN MACHINERY COMPANY
4104 Court St., Fairfield, Iowa
A Subsidiary of Mechanical Handling Systems, Inc.

Louden

MON[illegible]ANES

Since 1867—the first name in materials handling



"FOAMGLAS® INSULATION on the outside stopped sweating on the inside,"

reports P. Silas Bailey, President, Lydia Cotton Mills

P. SILAS BAILEY
President and Treasurer
Lydia Cotton Mills
Clinton, S.C.

"Wet weave room walls were obvious evidence that even 16-inch masonry walls weren't insulation enough to enable us to maintain the precise humidity and temperature we needed," recalls P. Silas Bailey, president and treasurer of Lydia Cotton Mills, Clinton, S.C. "The addition of FOAMGLAS insulation on the *outside* of the existing walls stopped the sweating on the inside."

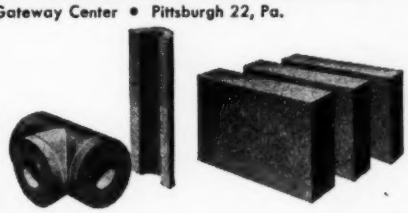
While ordinary insulations absorb moisture which cuts efficiency, FOAMGLAS' sealed glass cells are impervious to water vapor. This means that the rigid blocks of cellular glass can be depended on to help keep indefinitely the exact humidity and temperature required in a weave room.

Three new booklets tell how fireproof, strong, lightweight FOAMGLAS can benefit *you*. Please write now for sample and booklets, indicating if you are interested in insulation for buildings, piping or tanks and other equipment. Address inquiries to: Department AH-44 . . .

PITTSBURGH CORNING CORPORATION
One Gateway Center • Pittsburgh 22, Pa.

FOAMGLAS®

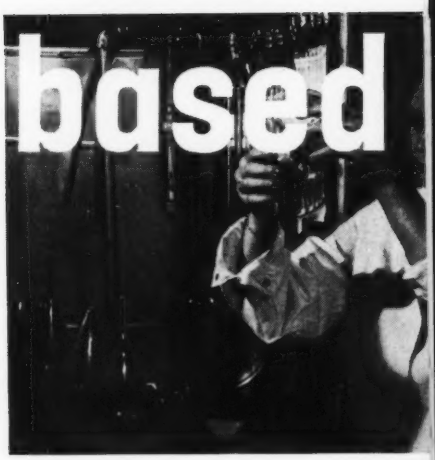
the cellular glass insulation . . . it stays dry!



PITTSBURGH PC CORNING®

Pittsburgh Corning also makes PC Glass Blocks

Silicone based



It has taken the combined

efforts of two great organizations – ONYX and DOW CORNING

– to develop and make available to the textile industry

REPELOTEX, a revolutionary water repellent that has

life-of-the-fabric durability, that is FOUR WAYS BETTER

than any other water repellent yet produced.

. . . AND TO BACK IT UP, A TV PROGRAM.

Tags promoted on TV will be available to manufacturers using fabrics finished with Repelotex made with Dow Corning silicones.

ONYX
REPELOTEX ST PROCESS
FINISH MADE WITH
DOW CORNING Silicones
THE MARK OF Sterling QUALITY

ONYX PRODUCTS FOR THE TEXTILE INDUSTRY

ONYXSANS	**Permanent softeners with standard laundering and dry cleaning for the life of the fabric.**
XYNO RESIN G-36	**Finish to impart highly durable, stiff resilient effects.**
XYNOFIX FL	**An outstanding dye fixative.**
XYNO FINISH 9909	**Unusual softener for cotton and synthetic fibers with outstanding resistance to color change.**

ONYX OIL & CHEMICAL COMPANY

TEXTILE DIVISION

WARREN & MORRIS STS., JERSEY CITY 2, N. J.

CHICAGO • BOSTON • CHARLOTTE • ATLANTA For Export: ONYX International, Jersey City 2, N. J.

MEMO from:

COMPARATIVE TRIAL OF WATER REPELLENTS				
	REPELOTEX ST.	ZX	NX	PX
% Used in Bath	5	8	12	10
Initial Spray	90	80	90+	90
After 1 Dry Cleaning	90	70	80	70
After 3 Dry Cleanings	90	70	70	70
After 5 Dry Cleanings	90	50	70	70

CLOTH: 50/50 Acetate-Viscose gabardine.
All treatments applied in conjunction with crush-resistant finish, and according to manufacturer's directions.
Wet pick-up: 63 to 64%. Dry cleaned with Stoddard solvent.

REPELOTEX

4

FOUR WAYS BETTER by actual laboratory tests* after repeated launderings and dry cleanings, new REPELOTEX offers proof positive of the ultimate in water repellents:

DURABILITY — Practically any fabric, of any type of fiber or construction, can be treated with REPELOTEX with the assurance of near permanent repellency.

STAIN AND SPOT RESISTANCE — Unusually resistant to non-oily spots and stains, such spots can easily be removed. Oily spots are dry-cleaned out without loss of repellency in fabrics treated with REPELOTEX.

AS A FINISH — REPELOTEX has a number of other remarkable properties that make it a must for successful water repellency: REPELOTEX improves sewability; imparts a softer, quality hand; improves the strength of resin-treated fabrics; resists mark-off effects; is fully compatible with resin treatments; has no unpleasant odor; requires no after-wash; is exceptionally stable.

*Laboratory spray ratings determined by Standard Test Method 22-52 of the AATCC.

AT A COST LOWER or no more than ordinary silicone or non-siliconic finishes, you get all the plus values of REPELOTEX, developed out of the resources of ONYX and DOW CORNING. *Write or wire for a most convincing trial.*

MEMO from:

TEXTILE MACHINE WORKS
Reading, Penna.

IN MAY! . . . This dramatic advertisement reaches into the homes of nearly four million of America's most fashion-conscious women! . . . It appears as a full-page (bleed) in Vogue!

. . . and in Harper's Bazaar
Seventeen
Glamour
Charm
Mademoiselle

in smaller space, helping to sell extra quality, extra beauty, extra wear and perfect fit of *your* full-fashioned stockings.

• • •

To make extra dozens of the finest full-fashioned stockings faster and without interruption, turn to

The "READING 100"
Full-Fashioned Knitting Machine

30 Sections 51, 60, 66 Gauge

ALWAYS IN FASHION WITH FULL-FASHIONED STOCKINGS

There go the most beautiful legs in the world, American legs . . . in the full-fashioned stockings American women prefer. Full-fashioned stockings look better, feel better, wear better every time. They're custom-knit to fit at every crucial point, with never a wrinkle, a twist, or ugly sag. And only full-fashioned stockings boast the fine back seam with its magic perspective . . . an artist's trick that flatters the leg. So if you want the best in fashion, insist on full-fashioned stockings. It's smarter that way . . .

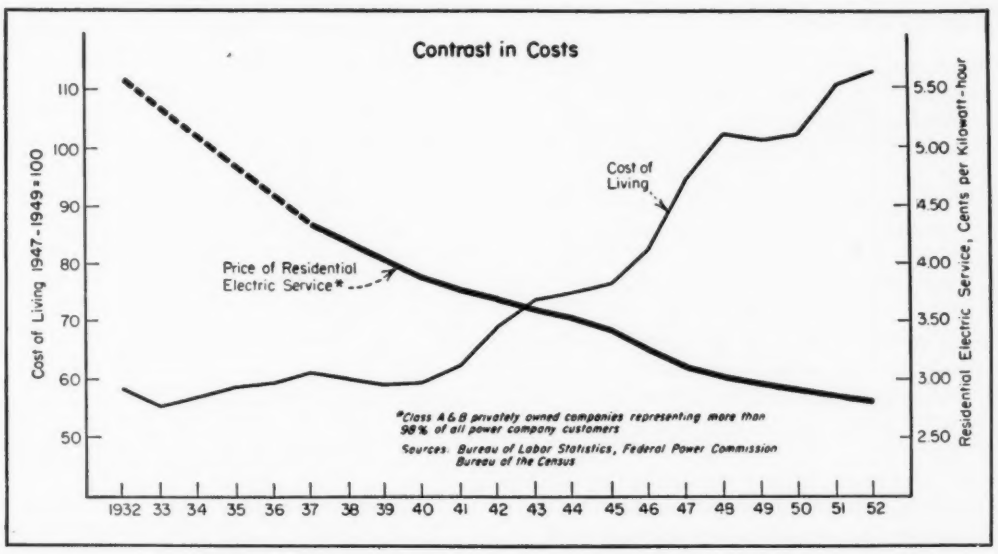
©1954 Hosiery Fashions

A MESSAGE TO AMERICAN INDUSTRY • ONE OF A SERIES

A 20-YEAR RECORD...

The Electric Power Companies' Case for Public Confidence

An economic study of the record of the investor-owned electric power companies of the United States over the past twenty years underwrites their claim to public confidence today. A key factor of this record is set forth by the chart in the middle of this page. This shows that while the cost of living as a whole has almost doubled, the average price of electric energy for residential use in the United States has been cut in half.



The average prices of industrial and commercial power also are much lower than they were twenty years ago.

Such a study confirms the record on other key accomplishments of the electric power companies during the past two decades.

They have not failed, either in peace or war, to meet the nation's rapidly expanding electric power requirements. In paying tribute to the performance of these companies during World War II, J. A. Krug, Director of the Office of War Utilities, said, "Power has never been too little or too late." The same can be said for the entire period of the past twenty years.

To be ready with enough power -- on time -- the electric power companies have expanded their production fourfold since 1933. This has required an investment of over $17 billion in new facilities. To raise the funds for this investment they have enlisted the participation of about 3 million direct stockholders. Through life insurance companies, banks and similar institutions, about 90 million Americans -- more than half of the nation's total population -- have become investors in electric power companies. By thus relying on private investment for their expansion, the power companies have provided their

plant and operating equipment without burden on the taxpayer.

In addition, the investor-owned companies have paid about $12 billion in taxes to various governments – national, state and local – over the past twenty years. Unlike government-owned and -operated systems, they have received no public subsidies. When taxes and subsidies are taken into account, the rates for electricity charged by the investor-owned companies have been as low as, or lower than, those charged by government-owned and -operated systems.

Many Americans do not appreciate the job that the power companies have done over the past two decades. That is due, in part, to the public memory of financial abuses by some utility holding companies during the 1920's. This memory obscures a clear and unprejudiced view of the progress since those days. And some of the all-out advocates of reliance on government rather than on regulated private enterprise for the development of our power resources do their best to keep this memory of the past alive in the present.

An Impressive Case

Some special cases of electric power development may involve problems for which the investor-owned companies are unable to provide full solutions. This may be true, for example, of some large multiple-purpose projects that combine electric power generation with related developments such as the improvement of navigation, flood control and the irrigation of arid lands. Some of the economic and administrative problems imposed by such projects are not well adapted to effective handling by private enterprise. Flood control and the improvement of navigation, for example, usually involve the provision of much costly service over and above the cost of producing power.

It is true, however, that in some cases development of the electric power side of multiple-purpose projects by private enterprise may well be more feasible than would appear from statements by some government power advocates. And the record indicates that even in those projects on which both the power generation and the other services are handled by public authority, it may well be desirable to have the investor-owned companies assume the transmission and distribution functions.

Our study of the record of the investor-owned and -operated companies over the past twenty years has led us, of course, behind the statistics that bear on the wisdom of giving them a priority in the development of our power resources. It reveals that these enterprises are manned by people who, through lifetime experience, are peculiarly conversant with the needs of the communities they serve. They have given the consumer notably good service while conforming to standards set and enforced by public regulatory commissions. They have won the confidence of the investing public. By their nature and their experience they are competent to handle any power program that can be demonstrated to be economically sound.

The Paramount Public Interest

By their economic performance during the last twenty years, the electric power companies have earned the confidence of the public. By relying on these companies to meet its electric power requirements the public will fully protect its economic interest in ample and efficient service at fair prices.

That is where our study comes out. Our findings do not touch the political consideration that private operation of electric utilities under public regulation is a safeguard against further concentration of both political and economic power in a federal government that already commands too great a concentration. But if these findings make an economic case for preferring power development by tax-paying business as against power development by governmental agencies, they clear the way for an appeal to the paramount public interest in safeguarding our personal and political freedoms against the further encroachment of government.

This message is one of a series prepared by the McGraw-Hill Department of Economics to help increase public knowledge and understanding of important nationwide developments that are of particular concern to the business and professional community served by our industrial and technical publications.

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Donald C. McGraw

PRESIDENT

McGRAW-HILL PUBLISHING COMPANY, INC.

Is he dependable? An overseer on

TEXTILE WORLD
April, 1954 • Vol. 104 - No. 4

How Cone Mills Develops BETTER SUPERVISORS

▶ Areas of each supervisor's job performance that need improving are pinpointed by appraisal groups

▶ Each supervisor is given individual counseling by his department head

▶ Group-training conferences concentrate on subjects that hit the broad needs of the supervisor

By THOMAS B. WINSTON, Assistant Editor, TEXTILE WORLD

A MANAGEMENT-DEVELOPMENT PROGRAM is working in six Cone Mills plants. In all, over 200 supervisors are involved.

There are two parts to the Cone program: individual-appraisal sessions that analyze the needs of the particular individual, followed by counseling sessions; and group-training sessions that cover the broad needs of all supervisors.

A program that involves counseling by textile supervisors without previous training in this work takes a long time to hit full efficiency, but the program at Cone is working and its advantages are several:

1. There have been definite improvements in individual supervisors.
2. The supervisors have a new awareness of responsibilities and feel more a part of management.
3. The supervisors appreciate knowing how they're getting along.
4. Top management gets a periodic review of the supervisory situation.

The management-development program was started in 1950. Cone was looking for a way to help its supervisors do a better job; and after studying all kinds of programs, the Cone management decided that the ideas recommended by American Management Association looked the most practical. From those ideas, the Cone program was developed. (A personnel man, William Leonard, coordinates the program.)

Appraisals Pinpoint Areas of Improvement

The philosophy of the appraisal program is: If you can determine the needs of the particular individual, you have a basis for assisting him. To determine these needs, the logical people to rely on are the people in daily contact with the man. At Cone, important aspects of the man's job are examined in informal conversations between people who know the man, backed up with all the facts and figures that can be mustered. With several people contributing their impressions, you can get a rounded picture of a man.

The formal name given to these informal conversations is "appraisal." Five people are usually in the group, all superior to the man and familiar with his work over a period of time. Three levels of supervisors are now appraised: general overseers (department heads), shift overseers, and assistant overseers. (Cone uses "assistant overseer" instead of "second hand.")

For instance, if the assistant overseer of the card room is being appraised, the group would probably include the general overseer and the shift overseer of the card room, the two assistant superintendents of the plant (in the case of a big mill), and an overseer of a neutral department.

The neutral overseer comes preferably from the following processing department; when the card-room man is appraised, the neutral overseer would come from the spinning department. A neutral observer can usually be more objective than close associates.

The group usually meets in the plant, and an appraisal session takes an hour or hour and a half. A representative from the personnel department acts as the discussion coordinator and takes notes. The discussion is informal, but all aspects of the supervisor's job are covered.

No one in these discussions can get away with a loose statement. If one of the group can't convince the entire group on a point, the point is not valid. This procedure keeps down bias.

After the meeting, the coordinator organizes a report that must be approved by every member of the group, and every member signs the report.

An appraisal at Cone is based on what is actually expected of a man on his job and not on intangibles. There are four areas that are explored:

1. What shape is the job in?

How is the man's production record? (Production figures are usually available.) How is he in regard to costs? Does he have the cooperation of the people working under him? Quality is mentioned, and any ideas that he has contributed, plus housekeeping, safety, etc., in his province. So the first area that is explored is the results that the man gets on the job.

2. How does he do the job?

Does he delegate authority or does he try to do everything himself? Can he plan, organize, and follow up? Does he make his own decisions or does he lean on other supervisors? Is he receptive to new ideas? Does he roll up his sleeve and pitch in himself, or does he get the job done through the people on the job? (Some supervisors have a tendency to spend too much time under machinery.)

Some of the Cone plants have

CONE MILLS CORPORATION - Greensboro, N. C.

SUMMARY APPRAISAL

OF

Name..... Age..... Date.....19.....

Position..... Department.....

Plant..... Company Service..... Years on present job .....

This Summary Appraisal is a narrative description developed from a detailed analysis of the employee's work.

PERFORMANCE

RESULTS (What has this individual accomplished in measurable results since his last appraisal? Consider quantity, quality, cost and time element of work. Be specific—give facts and figures wherever possible.)

.....

.....

.....

.....

METHODS (How does this person go about getting his job done? How does he work with and through people? Be specific.)

.....

.....

.....

.....

PERSONAL QUALIFICATIONS

General .....

.....

.....

.....

Strongest single qualification.....

.....

What needs most improvement?.....

POTENTIAL

What is the next step ahead for this individual and does he have further potential beyond next step? If so, outline.

.....

.....

RECOMMENDED ACTION FOR IMPROVEMENT

(Recommend action for improvement such as Training, Change of attitude, Encouragement, etc.)

.....

.....

.....

.....

CHECK THE CURRENT STATUS OF THIS INDIVIDUAL:

[ ] Immediately promotable
[ ] Promotable
[ ] Satisfactory plus
[ ] Satisfactory
[ ] Decision deferred because new
[ ] Questionable
[ ] Unsatisfactory

APPRAISAL MADE BY

Name..... Title.....

Name..... Title.....

Name..... Title.....

Name..... Title.....

The performance and personal qualification section of this report have been discussed with the employee by—

Name..... Date.....

THIS SUMMARY OF THE APPRAISAL SESSION must be approved and signed by every member of the appraisal group. William Leonard, who coordinates the management-development program, writes the report from notes taken during the appraisal.

Is he dependable? An overseer on the appraisal group might give an informal description of how the man went about doing an assigned job.

3. What are his qualifications?

Does he have the technical knowledge necessary for the job? How is his personality? Is he calm and collected or is he temperamental? Does he blow up? Is he tactful or blunt? Is he overdominant? Does he make himself easily available, or does he erect barriers? How is his health, his emotional makeup? Does he have ulcers?

4. What most needs improving?

Finally, the appraisal group tries to arrive at the one point on which the man needs to work. This point is not necessarily a weakness; it is simply the point that could best be improved. One man's "weakest" point might be "stronger" than another man's "strongest" point. The group also tries to focus on the man's outstanding quality.

Either aspect, where the man is outstanding or where he needs improving, might be technical knowledge, planning and organizing, getting along with people, delegating authority, or any aspect of the job.

The group touches on the man's potential. Is he at his peak, or is he capable of greater responsibilities?

As a conclusion, a method of action is recommended by which the man can improve himself. The members of the group try to agree on the approaches that are most practical for the particular individual.

Putting Information to Work

As Mr. Leonard says, "Putting the information to work is the meat in the coconut." Counseling is one way to help a man improve his performance. The information that results from an appraisal session is reviewed with the man appraised. His job performance is reviewed with him, but not his status or potential.

Counseling is not an easy job, and the general overseers were selected to do the job because they are better acquainted with the supervisors and because of the training in leadership that counseling provides. A manual on counseling principles was prepared, and instructions in counseling techniques were given the general overseers.

With further experience and training as the program continues, the general overseers will become better and better counselors, and the management-development program will get better and better. The critical point in a successful development program is how the people are handled in the counseling session.

Some of the Cone plants have started the second round of appraisals. In the second appraisal, the appraisal group tries to determine what progress has been made and how the man is coming along. Then the appraisal follows the general procedure of the first appraisal.

Board Reviews Appraisals

After all the men in a department have been appraised, the general overseer goes before a review board composed of the plant superintendent, personnel director, general manager, and vice president in charge of the division.

The overseer tells the review board the situation in his department and reviews the performance of each supervisor. In this way, higher management keeps up with how each man is getting along. Then the review board appraises the general overseer on his performance.

The emphasis here is on general executive ability, and the procedure follows the same basic system of the other appraisals.

Group Training Hits Broad Needs of Supervisors

As a supplement to the individual counseling, Cone has a series of group-training conferences to provide assistance on problems that are common to a large segment of the supervisors. To develop the material for these conferences, Mr. Leonard examines the appraisals in a plant and tries to discover factors that keep popping up. He then tries to locate films and other training aids that would be helpful, and he develops discussion material. The discussion material tries to relate the problems to the local situation.

The conference leaders are usually assistant superintendents, and they have been given training in conference leadership. Line men make the best conference leaders because they are familiar with the day-to-day problems of the supervisors and talk the same language.

These conferences are held once a week in the mill during working hours. Sessions last about an hour, and the day and time depend on the plant activities.

Some plants have completed the second series of conferences; others haven't yet completed the first series. In a large plant, it takes a year to a year and a half to complete the first appraisal phase of the program; then the group-training conferences begin. The program is continuous.

COUNSELING FOLLOW-UP

Counseling with a person about his job performance should not be limited to one occasion following his appraisal.

The most effective approach to the improvement of a person's performance is continued, well-planned, day-to-day guidance. This does not mean that a detailed, lengthy interview must be held every week. But periodically through the year, informal talks should be held to see what progress has been made on the points that need improvement.

At the main interview following the appraisal, you helped set the stage for the person's development. Advice was given on what could be done for self-improvement. Follow-up talks, progress reviews, and suggestions are necessary to aid the person in his development.

The occasion for these follow-up talks depends on your own judgment. You know your men—their attitudes, their needs, and when and how to approach them. These talks should be made at least several times a year.

Listed below is one of your men and the areas of his performance that need improvement. These points can serve as a focal point for your talks.

NAME .....

POINTS THAT NEED IMPROVEMENT: .....

I have talked with this man concerning his development on the below listed dates.

COMMENTS .....

.....

.....

Signed..... Date.....

COMMENTS .....

.....

.....

Signed..... Date.....

COMMENTS .....

.....

.....

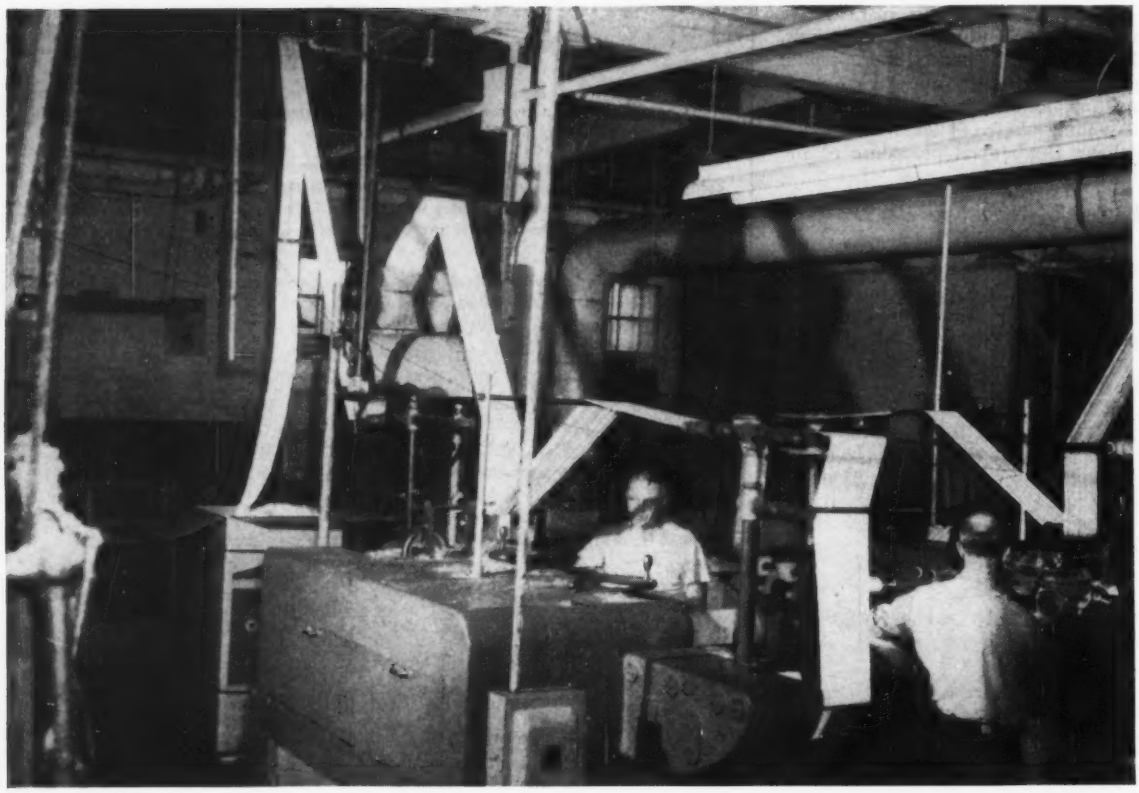
Signed..... Date.....

INFORMAL FOLLOW-UP INTERVIEWS are recorded by the counselor to keep check on a man's progress.

First Series of Films

Film	Good	Fair	Poor
1. Supervising Workers on the Job	13	0	0
2. First Impressions	12	1	0
3. Developing Cooperation	13	0	0
4. By Jupiter (a film on courtesy)	13	0	0
5. Maintaining Quality Standards	13	0	0
6. A New Supervisor Takes a Look at his Job	12	1	0
7. Supervising Women Workers	11	2	0
8. As Others See Us (a film on safety)	10	3	0
9. Instructing the Worker on the Job	13	0	0
10. Working With Other Supervisors	13	0	0
11. The Supervisor as a Leader — Part I	13	0	0
12. The Supervisor as a Leader — Part II	12	0	0

TWELVE FILMS were shown during the first series of group-training conferences. Discussion material related the films to the local situation. Questionnaires sent to 14 supervisors showed this response. Every supervisor reported that he benefited from the meetings.



TOW TENSIONING is an elaborate arrangement designed to reveal breaks before they can cause trouble and to parallelize the filaments. Note Champlain's beater in first V the tow makes.

How Champlain Handles ORLON TOW

▶ Turbo Stapler at Champlain Spinners, Inc., breaks Orlon tow and reduces the denier to assist in making soft, cashmere-like yarns

▶ Mill-developed tensioning arrangement and other operating ideas assure successful Stapler operation

By JAMES H. KENNEDY, Managing Editor, TEXTILE WORLD

AN INTEGRAL PART of the modified silk system of worsted-type-yarn manufacture at Champlain Spinners, Inc., Whitehall, N. Y., is the Turbo Stapler. The Stapler stretches and breaks tow to the long, variable fiber lengths required for the silk system, which features low twist, pin control, and low speeds for premium yarns.

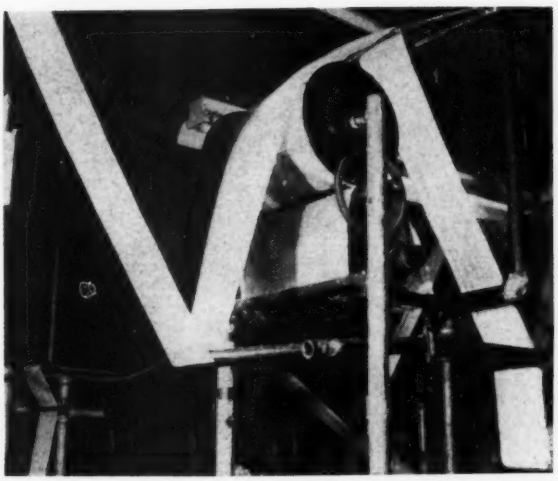
Champlain is using the Stapler for Orlon tow to make the well-known Champlon yarns, which are difficult to distinguish from cashmere and are knitted into washable sweaters. Other kinds of tow besides Orlon may be processed at Champlain if the yarn market demands it.

Champlain uses three Staplers, one of them having been in operation over a year. Each machine is fed about 330,000 total deniers of 2-den. Orlon tow. Delivery is about 50 lbs. per hr. of 1.75-den. sliver that weighs 2,200 grains per 20 yds.

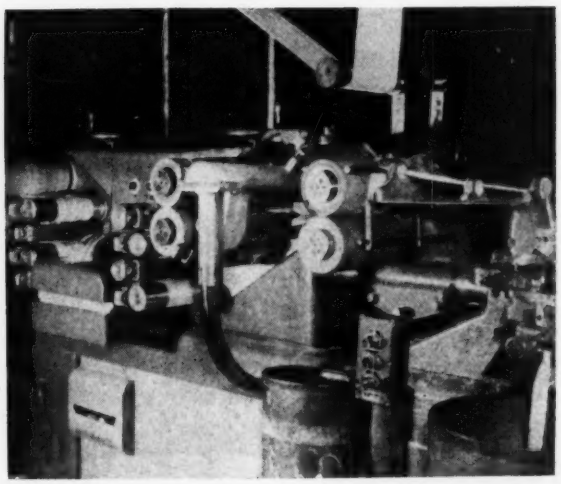
Present production is only about 50% of theoretical machine efficiency, partly because defects in the tow require stopping the machine to get quality sliver without thick places.

Mill-Made Tension Arrangement

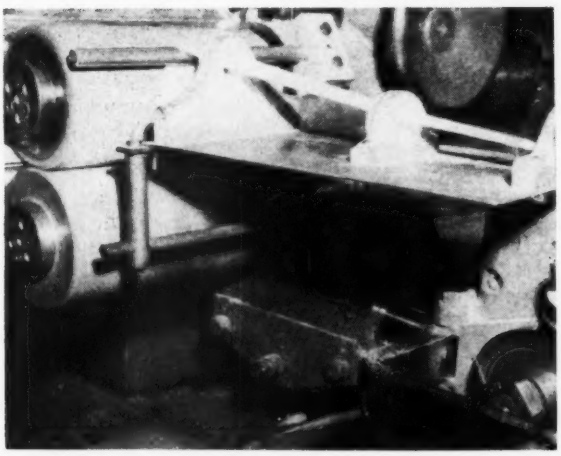
Since tow feeding directly from the carton can't be used efficiently, a special tensioning arrangement is necessary. The strand passes through a ladder-type tensioning device over the carton and then is "fluffed" by a special eccentric beater designed at Champlain. This beater helps to separate the filaments and prevent breakage in the stretching zone of the Stapler.



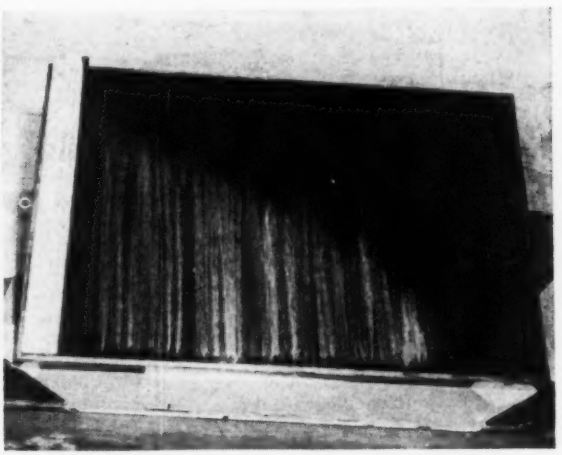
CHAMPLAIN'S BEATER (top) is an oval-shaped drum that revolves at high speed to fluff the tow by a rapid succession of sharp blows. The beater was designed by Champlain.



TURBO STAPLER at Champlain has rubber-and-Micarta roll combination. It stretches and breaks 50 lbs. per hr. of Orlon tow with 1.5% waste.



1-IN. PORCELAIN EYES (a Champlain idea) are set in wood and mounted on a sheet-metal plate between the breaking-zone delivery rolls and the crimper.



STAPLE ARRAY after processing on the Stapler with an 11-in. setting in the breaking zone looks like this. Maximum length is 11 ins. and minimum length is 3 ins. Denier went down from 2.0 to 1.36.

The rest of the guides over which the tow passes add tension and make the filaments parallel before they enter the Stapler.

The tow is gripped by three sets of rolls in the Stapler, and Champlain has standardized on rubber top rolls and Micarta bottom rolls. Pressure is set at No. 34 on the handwheel, which is equivalent to about 1,000 lbs. total nip pressure.

Tow first passes through an entering section with centering and width controls. Then comes the heated stretching section, with tensioning rolls before and after.

The draw ratio, or stretching draft, at Champlain is 1.58 and plate temperature is 280° F.

Denier is reduced from 2.0 to 1.36 in this section.

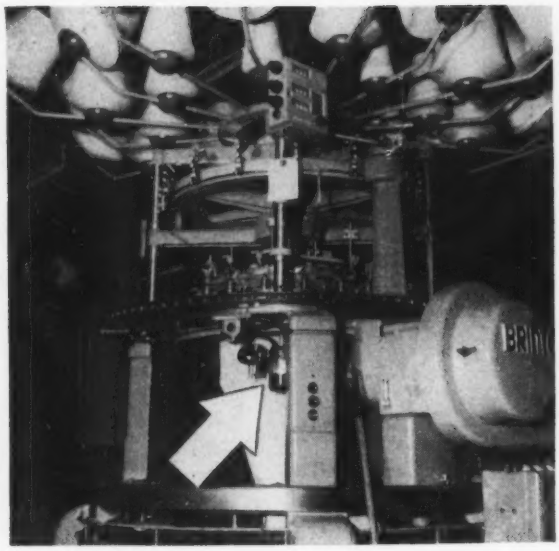
In the breaking zone, which comes next, Champlain has set the draft at 3.1 and the breaker bars to mesh ⅝ ins. (No. 3 on the machine scale). This mesh setting varies with fiber strength, elasticity, and finish. The breaker bars are set 11 ins. from the front or delivery rolls to break fibers to an 11-in.-maximum and 3½-in.-minimum length for Champlon. This setting can be estimated, but the exact setting is determined by trial and error to give the finished staple array desired.

Between the delivery rolls and the crimper, Champlain put in a set of three 1-in. porcelain eyes spaced 7 ins. apart. The guides are set in wood and mounted on a sheet-metal frame that fills the space between delivery rolls and crimper. The arrangement helps to return the flattened tow to sliver form in preparation for crimping.

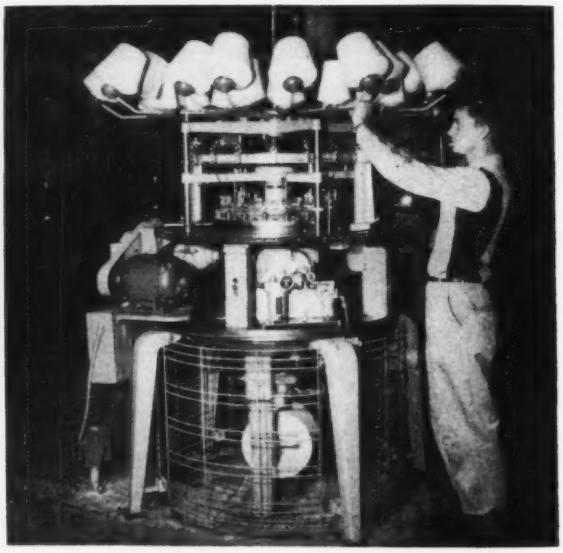
The crimper is set to insert 18 to 20 crimps per inch. Wheel pressure is 200 lbs., and stuffing-box pressure is the minimum, O on the vernier adjusting wheel.

Stapler waste is removed once a shift and amounts to about 1.5%.

An open drawing, an intersecting gilling, three gill reducings, roving, and spinning follow the Stapler and constitute the modified silk system at Champlain.



HOLE DETECTOR, (arrow) on rib machine feels out holes and drop stitches. Excess oil is collected in a glass bottle under the gear ring, and counters are fitted to simplify pay rates.



MAGAZINE CREELING allows yarn to be changed without stopping the machine. Oil-Mist lubrication unit on each machine keeps needles and cams constantly oiled.

Union Underwear Co. Modernizes for High PRODUCTION and QUALITY

Up-to-date equipment at Union Underwear's new plant includes:

Knitting machines with—
- **Mist lubrication**
- **Fabric fault detectors**
- **Magazine creeling**

A continuous bleaching range that—
- **Processes fabric at 350 ft. per min.**
- **Produces a uniform white**
- **Mixes its own chemicals**

By JAMES H. BLORE
Assistant Editor, TEXTILE WORLD

HIGH-SPEED PRODUCTION of knitted fabric and garments has not lowered quality standards at the Taylor Mfg. Co. Div. of Union Underwear Co., Inc., Campbellsville, Ky. Modern machinery, methods, and buildings have helped to increase production, reduce costs, and keep seconds at a low level.

All processes from yarn receiving to finished-goods shipping are under one roof in a new two-story brick building. Goods are shipped from the dock where the yarn is received, and the plant is laid out so that the products flow smoothly through the knitting, bleaching, and dyeing processes on the ground floor and back on the second floor through the cutting, sewing, and finishing processes.

A conveyor transports yarn from the receiving dock to the yarn storage room next to the knitting room. High ceilings, white-painted walls, and many windows keep artificial lighting costs down in the yarn storage area.

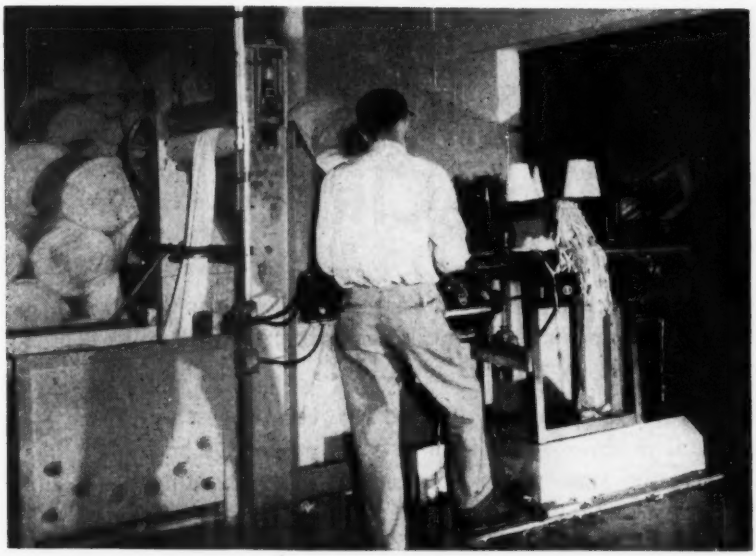
Rubber Pads Under Machines Give Smoother Knitting

The knitting room conditions are kept constant by a Carrier Corp. system that delivers clean air at 67% r.h. and 83° F. Electrical conduits and air pipes are laid in the concrete floor to eliminate dangers of people falling over exposed piping. A square foam-rubber pad under each machine leg gives smooth machine operation. The pad is useful during jogging periods.

The knitting machines are of the most modern type and are equipped with the latest devices to increase production and improve quality. They are arranged so that each knitter has an equal work assignment of machines knitting various sizes and fabrics. Although the machines are spaced 6 ft. apart to give ample working area, this grouping system eases the knitters' work.

A 12-ft. central alley between rows of four machines provides ample space for yarn deliveries to the knitting machines. Lots of space has been made available in the knitting room because the new Brinton machines have the new-type handwheel that doesn't project from the machine.

A geared ring around the cylinder-head ring is turned to move the cylinder for checking purposes. This ring allows fixers to comfortably check knitting adjustments from all sides of the machine. Although a jog control is fitted to the machine, fixers get a smoother needle action for adjusting thread guides and needle timing with the turning ring. The jog control is operated from a push button on the cylinder ring support. Knitters find



FEED END of continuous bleaching range is in the fabric stock room. Fabric ends are sewed tubular to get better bleaching, and a colored marker indicates changes of fabric width.

that the jog control speeds the repair of a press-off because the jogging helps the fabric to fall between the cylinder and dial.

Oil-Mist Units Improve Quality

Each rib machine is fitted with an Alemite Oil-Mist lubricating unit. The unit is screwed to the bottom ring and supplies constant lubrication to the dial- and cylinder-needle cam tracks. These units have eliminated the oil marks that were so prevalent when the conventional oiling methods were used.

The Oil-Mist units have aided quality by reducing needle breakage and increased production by reducing machine downtime. The oil reservoirs are checked daily by a maintenance man who also oils the parts that are not oiled by the lubricator. These parts include the drive gears, fabric take-up, and dial shaft.

Compressed air is mixed with an extreme-pressure oil in the lubricating unit's mixing chamber to form a fine mist. This mist is forced, at a pressure of 20 psi., through a metal pipe that leads through the head ring to a T piece.

Two rubber pipes lead the mist from the T piece to the cylinder and dial cam tracks. The enclosed cam track prevents the mist from seeping into the knitting room.

A glass jar screwed to a connection on the ring-gear undercasing collects the excess oil and prevents the oil from dripping on the fabric. The oil jar is drained every six or seven weeks.

Hole Detectors Reduce Waste

A Wesco hole detector, on each rib machine, improves quality and reduces waste by stopping the machine when holes are made in the cloth by faulty needles or imperfect yarn. The device is screwed to the cylinder-gear ring cover and supports six spring-loaded fingers that rest on the cloth just below the cylinder ring.

Each individual finger is adjusted to the taper of the cloth tube, but a fabric ring below the stop motion supports the cloth and reduces the taper. The six fingers are arranged one above the other to compensate for the course spiral of multifeed machines. The tips of the fingers fall into a hole or a drop stitch; and the rotating cloth causes the finger to trip, make a contact in the stop-motion circuit, and stop the machine.

A lever on the unit is pressed to allow the machine to operate until the hole gets below the stop motion. When the fault knits past the stop

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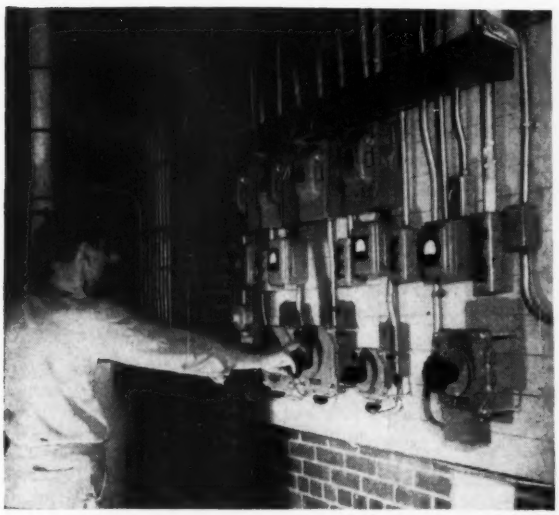
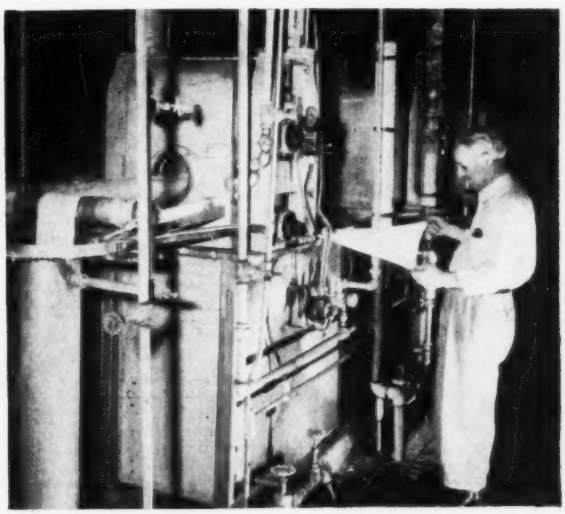


CONTROL PANEL of bleaching range is operated by R. Wells, who checks on fabric height in J-box, speed of fabric, and alkalinity. Nine motors are controlled at variable speeds.



WASHING UNIT of range has two hot-water sprays. Micro switches on pressure rolls protect the machine and fabric against damage. Dyeing Superintendent Albert Noel checks fabric.

New Processing Ideas From Cotton Research Clinic

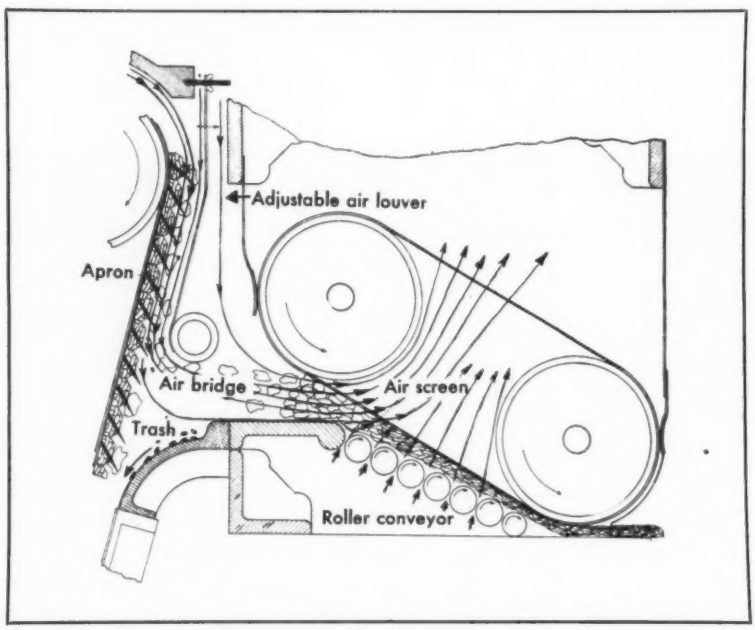
▸ **The fifth annual Cotton Research Clinic, sponsored by the National Cotton Council, was held this year in Pinehurst, N. C., late in February. Some 70 mills were represented by the 225 registrants.**

▸ **The papers presented were about equally divided between processing ideas (from blending through roving) and fiber or yarn properties and tests. This report digests the sessions on processing. The remaining papers will be reviewed in the May issue of TEXTILE WORLD.**

New Fiber Feeder Cuts Variation of Mat

▸ **Improved feeder distributes tufts of fiber uniformly by air suction to a wire-belt condenser. Standard uniformity deviation of the delivered mat is 3.5% lengthwise and less than 3% widthwise.**

By **HOWARD H. LANGDON,** Curlator Corp.



FEEDER CONDENSER SECTION shows the flow of air and fiber tufts. Air pulling upward through the screen takes tufts of fiber from the spiked apron and pulls them through the air bridge and against the wire-belt screen. Tufts go to the lightest loaded section of the screen because air suction is stronger there.

ONE OF THE MAJOR PROBLEMS in the manufacture of nonwoven fabrics has been the lack of uniformity in the fiber mat. Mill-run picker laps, used in the Rando-Webber, had too much widthwise variation to produce mats of acceptable quality.

To improve the uniformity of the fiber mat delivered, it was necessary to devise a new method of distributing and condensing the tufts of fed fiber at the condenser screens normally used in a cotton picker.

The machine developed for this purpose is called the Rando-Feeder. The accompanying sketch illustrates the method used to distribute and condense the fiber tufts into a mat.

The feed hopper, spiked elevating apron, and roller stripper, not shown in the sketch, used with the feeder are more or less conventional. The stripper runs at 600 rpm. to reduce the feed to small tufts of fiber caught on the slanted apron spikes.

The new features of the feeder begin, as shown at the upper left-hand corner of the sketch, when the spiked apron reverses its direction and starts down.

In normal operation, the small tufts of fiber caught on the apron spikes travel down the back side of the apron until they are stripped from the apron by air suction at the point labeled "air bridge." Trash, metal, etc. too heavy to be carried by air suction drop by gravity into a trash box below the apron, and the tufts of fiber are carried forward by air to the condensing point between an air screen and a roller conveyor.

The air screen, made of wire mesh, runs over two 6-in. rolls; and a suction fan, located above the screen, pulls air through the screen as shown in the sketch by arrows. Since the accumulation of fiber tufts at any point of the screen reduces air suction at that point and increases it at points less heavily loaded, fiber flowing through the air bridge goes to the point of greatest suction. In this

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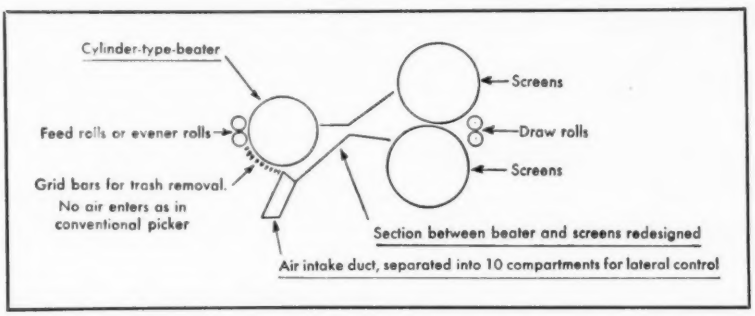
How To Minimize Picker-Lap Variation

▶ There are five main factors in picker-lap variation, and within-yard and lateral variations can play a big part in relatively short-term yarn and cloth variation

▶ The Tritex picker modification aims to reduce lap variation with a new beater, separate air intake, and redesigned beater-to-screen section

By **M. EARL HEARD, Jr.,** Tritex Corp.


Cylinder-type-beater
Screens
Feed rolls or evener rolls
Draw rolls
Screens
Grid bars for trash removal.
No air enters as in conventional picker
Section between beater and screens redesigned
Air intake duct, separated into 10 compartments for lateral control

MODIFICATIONS made on conventional picker to reduce lap variation are (1) solid cylindrical-type beater instead of regular Kirschner, (2) separate air intake instead of having air come up through grid bars, and (3) redesigned section between beater and screen section.

THE IMPORTANCE OF THE PICKER LAP is often underestimated. Picking is the first process in the mill where we make an attempt to control weight per unit length; and doublings to overcome picker mistakes cost money.

For example, a fair average cost for double-creel roving in spinning is 1¢ per lb. more than single-creel roving for 1.0-hk. stock spun into 20s. In a mill producing 100,000 lbs. of yarn per week, this added cost amounts to $1,000 per week.

With the trend toward fewer and fewer doublings, evenness at each process increases in importance. Each process must be examined critically from time to time for possible improvements.

There are at least five factors that are important in a picker lap:

1. Total-lap-weight variation
2. Yard-to-yard variation
3. Within-yard variation
4. Lateral variation
5. The construction factor

Total-Lap-Weight Variation

Of course you cannot indiscriminately mix gin bales, standard-density bales, and high-density bales in a mix because the different densities of stock play havoc with lap weights. But variation in stock density can also be caused by having too few hoppers or blending feeders and feeding them improperly. There should be two blending feeders for each picker, and three are better.

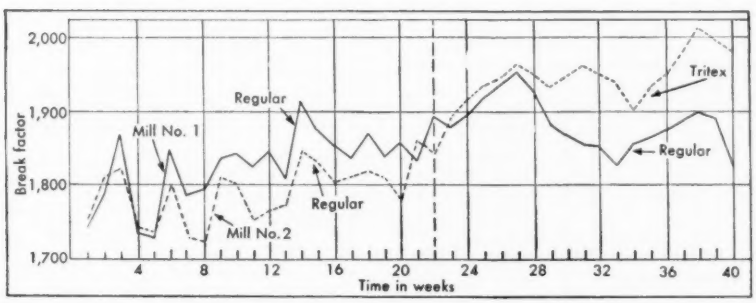
If the picker operates at 300 lbs. per

CONTINUED ON PAGE 316

Here's Joanna's Experience With The Tritex Picker Modification

▶ Preliminary (and rather extensive) tests showed only a slight improvement for the Tritex modification, but a subsequent 40-week test proved that better picker laps were making better yarn

By **JOE L. DELANY,** Joanna Cotton Mills Co.



AT THE 22nd WEEK, Mill No. 2 was put on Tritex laps 100%. Mill No. 1 had been supplied with a large lot of regular laps. Both mills were spinning 40s yarn with Roth drafting systems, 1⅜-in. rings. Each point on the graph represents an average of 40 bobbins for the week (eight a day). Mill No. 1 normally runs ahead because of refrigerated cooling, but Mill No. 2 (with evaporative cooling) overcame this difference when Tritex stock was used.

WE BECAME INTERESTED in the Tritex modification because we had too much lateral and longitudinal variation in our picker laps. We felt that a better lap would mean a corresponding gain in successive processes: more-even card sliver with fewer neps, fewer ends down in spinning, and stronger, more-even yarn. So we fixed up one picker.

First Tests Were Inconclusive

Did we get what we wanted from the Tritex installation? No, we didn't. But we did get a more-uniform lap in the lateral direction. Tests on 36-in. lengths of 4-in. sections across the lap showed a weight variation of about 7% for Tritex vs. 15% for a regular picker.

We looked very hard for an improvement in neps, but a series of tests showed 39.4 neps per 100 sq. ins. for Tritex vs. 38.8 for the regular picker.

So we decided to check spinning ends down and yarn strength. Three tests averaged 25 ends down for Tritex vs. 30 regular. There was no great difference on a 30,000 spindle-hour test. Yarn variation on the Brush analyzer was 114 for Tritex vs. 117 regular. Break factor for Tritex was 1943 vs. 1936 regular.

We had checked just about everything and had come up with only a slight margin of improvement. Superficially, this gadget looked good. We were convinced

CONTINUED ON PAGE 319

COTTON RESEARCH CLINIC

Reversing Card Flats Offers Potential Advantages

▶ Running flats backward and reducing their speed reduces neps, flat strips, cylinder strips, and total waste. There is a little more foreign matter in the web, however.

By HUGH M. BROWN
Dean, Clemson School of Textiles

THIS IS A PRELIMINARY REPORT on carding research at the Clemson School of Textiles to determine the effect of running the flats backward.

It appears now that there are definite advantages to be gained by reversing the flats and reducing their speed.

Flat-Strip Loading Changes

Flats running backward are clean when they enter the front of the card and load slowly as they move toward the back. The flats become fully loaded only as they leave the cylinder, but the load is higher than normal for the first two or three flats. Part of the load carried out by each flat is picked up as it is leaving the cylinder; so many unopened tufts, seed particles, etc., are kept from being worked by the cylinder.

The character of the flat strips, therefore, is entirely different from the usual. Since properly stripped flats ordinarily make fewer neps, we theorized that clean flats coming in from the front should catch neps off the cylinder better than

CONTINUED ON PAGE 320

New Continuous Stripper May Cut Card Waste 1%

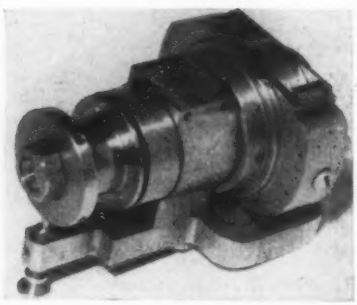
▶ The Retractor-Pin stripper, still in the development stage, mechanically cleans out the cylinder and lets the waste fall back on it

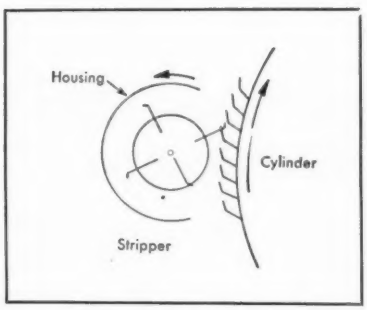
▶ Total card waste was reduced 1% in tests, and yarn quality remained the same

By RALPH A. RUSCA and GEORGE A. PETTIT
Southern Regional Research Laboratory

ONE OF THE MOST SERIOUS FAULTS found with the cotton card is the need for periodic hand stripping of the cylinder. The idea of a continuous stripper is almost as old as the card itself, and units for this purpose have been commercially available for several years.

Here is a continuous-stripping method now under development at Southern Regional Research Laboratory. The new stripper is still an experimental device, and test results are preliminary and incomplete.





RETRACTO-PIN STRIPPER is 5 ins. long and 3 ins. in diameter. It is driven by a spinning tape at a surface speed greater than that of the cylinder. Wires reach below knee of cylinder wire and are retracted to allow stock to be thrown back on the cylinder, as shown in schematic diagram.

How the Stripper Works

Through a slot cut in the back plate, the Retracto-Pin stripper traverses and strips the cylinder. The stripper is a little rotor set with pins that remove impacted cotton from the cylinder. The pins are withdrawn into the face of the rotor after they leave the cylinder, and the cotton is set free. Air currents then return the strips to the face of the cylinder after the stripper has moved along to the adjoining section of the cylinder.

The rotor is driven directly from the card with spinning-frame tapes, and rotor surface speed is faster than cylinder surface speed.

The slot in the back plate is sealed by a flexible metal band except at the point where the stripper is working.

The stripper itself is 5 ins. long over-all and just 3 ins. in diameter; so it must rotate very fast to have a surface speed in excess of that of the cylinder. Pins are

CONTINUED ON PAGE 319

Type of waste	Without stripper	With stripper
Flat strips	4.78(%)	4.57(%)
Cylinder and doffer strips	1.34	1.10
Motes and fly	3.06	3.03
Sweepings	.39	.35
Invisible loss	1.09	.53
Total waste	10.66	9.58

TOTAL CARD WASTE is about 1% less in this average of three 4-hr. tests with and the same number without the new stripper. Cotton was SGO, 1 1/16 in., soft character, carded at 11 lbs. per hr. Waste is rather high because the cotton was weather damaged and because the card was set very closely (flats at a tight 7) for research purposes under controlled conditions.

	Without stripper	With stripper
Strength		
Corrected skein strength (lbs.)	51.4	51.5
Break factor	1848	1848
Corrected single-strand strength (oz.)	7.0	7.1
Single-strand coeff. of variation (%)	13.6	13.3
Uniformity		
Mean deviation at 4 yds. per min. (%)	18.2	18.1
Mean deviation	18.8	19.1
Grade		
ASTM appearance	C−	C

YARN QUALITY was not significantly different with the new stripper. Tests were an extension of those outlined in card-waste table. Yarn was 36s in each case.

Rubber-Topped Flyers Improve Roving Performance

▶ The Clemson Pretwister, which concentrates twist between rolls and flyers, means fewer ends down and better-quality roving. The effect is obtained by eliminating the polished flyer eye so the flyer top can roll the roving.

By **HUGH M. BROWN,** Dean, Clemson School of Textiles

A SIMPLE PRETWISTING DEVICE developed at Clemson School of Textiles puts false twist in roving between the front rolls and flyer top. The unusual feature of the Clemson Pretwister is that it costs practically nothing but adds several hundred percent extra twist to improve roving uniformity and reduce ends down.

Our method consists of a rubber covering for the flyer top. That's all. The covering can be in the form of an inner or outer sleeve, or rubber paint can be used.

The pretwisting device inserts only false twist, and the extra twist does not follow the strand beyond the top of the flyer. The method was developed in connection with similar work that we are doing in spinning.

Fixing the Flyer Top

One way to use this idea is to put a rubber sleeve around the flyer top with the rubber edge slightly above the metal. (We used a cut rubber baby nipple and it worked fine). The rubber should be ½ in. high and should be cemented to the flyer top.

Another way to accomplish the same result is to ream out the flyer top and cement the sleeve inside the metal and projecting slightly above it.

Or the top of the flyer can be coated with rubber paint by painting, spraying, or dipping. The action is better if the hole is first reamed out to about a ½-in. dia.

Rubber-coated metal sleeves can also be used to accomplish the same result. The sleeves can be outside or inside the flyer top.

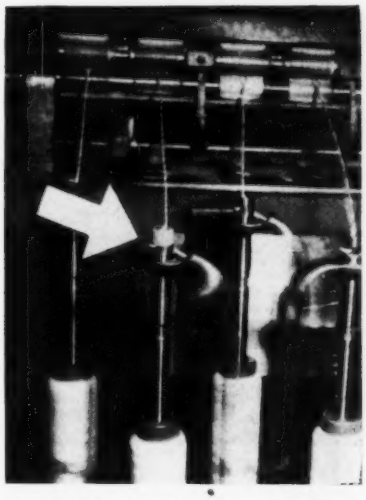
We are currently experimenting with metallizing to see if something can be worked out.

Plans are under way to have special sleeves made by one of the rubber manufacturers.

Benefits You Can Expect

The mechanical operation of the frame is not particularly changed. The only change is in operating results. We have found:

1. Fewer ends down
2. More-compact roving and harder bobbins



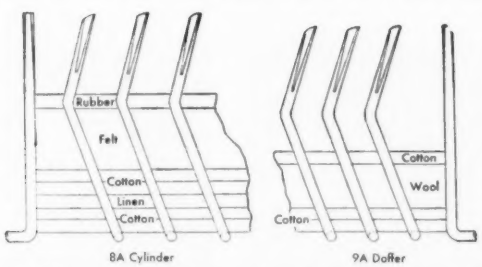
RUBBER TOP (arrow) on flyer concentrates false twist in the section between front rolls and flyer top to reduce ends down and improve roving and yarn uniformity. Notice how adjacent front-row end billows while rubber-tipped end is taut.

3. A chance to run with less twist
4. Unevenness reduced 20 to 25% for heavy roving
5. A chance for a practical stop motion because the strand is taut
6. Better unwinding of roving in spinning
7. More-even yarn

The method is not so effective on fine roving from high-draft frames because

CONTINUED ON PAGE 315

New Fillet Clothing Is Side Ground and Has No Lanes



NEW CARD CLOTHING is a cross between regular fillet and metallic. Cylinder clothing is seven ply with a rubber face, and the knee of the wire is below the surface. Both cylinder and doffer wire is side ground and set 2-3-2-3 to avoid lanes where fibers can lie or carding action can be missed.

A NEW TYPE OF FILLET CARD CLOTHING was announced in a paper presented by Tom Pogson, English Card Clothing Co. Ltd., Huddersfield, England. The new clothing is made of round wire side ground and is set 2-3-2-3 to eliminate the lanes usually found in clothing. Thus, it is said, a tooth is presented to every point of contact with the lickerin.

Two types of the clothing are being made: 8A for cylinders and 9A for doffers. On type 8A, the knee of the wire is below the surface of the foundation; so just a straight section of wire is visible. Type 9A has the knee above the foundation.

Under average carding conditions, grinding is said to be required every 1,000 hrs.—a light grinding with a special abrasive.

Stripping is said to be necessary just once every 40 hrs. for cotton and every 120 to 500 hrs. for various synthetic fibers.

Carding efficiency of the clothing is said to be equal to the best conventional clothing. Variation before and after stripping is well within the normal variation of the lap.

Card production is claimed to be increased because of the reduced lost time for stripping and grinding. The flexibility of the clothing and the foundation are said to prevent fiber breakage and to keep cards clean.

YARN TENSION is checked with a tensiometer each time Unirail uptwisters are creeled. Ollie Kiser is checking the tension on a 1½-lb. package of yarn being twisted to 58 tpi.

CLOSE LOOMFIXING results in 95% average efficiency and less than 5% seconds. G. C. Holloway is checking the alignment of a reed on an S-6 loom while starting a new warp.

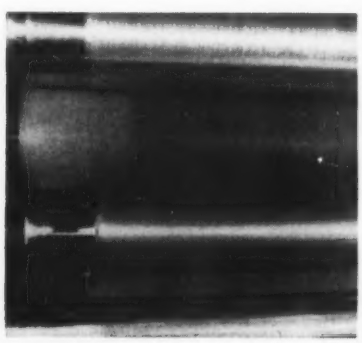
TENSION CONTROL Is Critical In Running 44HH Bemberg Yarns

▶ Controlling the yarn tension on each individual end at National Weaving Co., Lowell, N. C., makes it possible to weave the new Bemberg yarns at 95% efficiency with less than 5% seconds. Instruments to check yarn tension in processing and weaving take the guesswork out of yarn tension control.

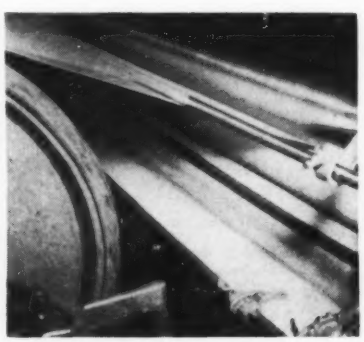
By J. RAYMOND FISH, General Manager, National Weaving Co.

HOLDING YARNS under constant and correct tension is the important detail in processing and weaving the new Type 44HH Bemberg yarn.

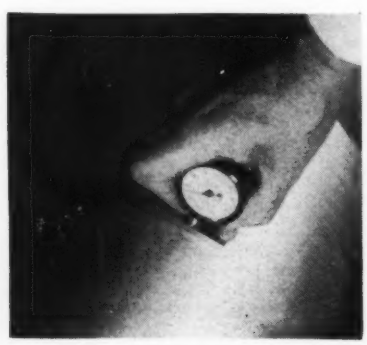
We have developed tension settings for spool winding, uptwisting, filling winding, warping, slashing, and weaving. In each process, yarn tension is controlled by constant checking with a checklist.



A THREE-ROLL QUETSCH is used to stabilize the rollers so that 2,250 to 2,500-psi.-ga. pressure can be applied to the rollers to properly penetrate and coat the yarns for high weaving efficiency.



A 50-50 LEASE with a split rod between the size box and the back cylinder separates the warp ends before they are dried. The lease is taken as rapidly as possible to prevent yarn burns.



THE DENSITY of the loom beam at the slasher is held to 70-gr. hardness by checking periodically with a density meter. The moisture content of doffed beams is controlled, too.

A GAUGE READING of 30 on the small dial results in a pressure reading of 2,250 to 2,500 psi.-ga. on the larger dial. All slashers at National Weaving Co. are equipped with Foxboro pneumatic-loading controls.

BRAKE-BAND SETTING of the Bartlett let-off is done with a Snap-on torque wrench welded to a steel bar. The top and bottom brake bands should break at a total of 20 ft.-lbs.

Except for tension control, no other machine settings are changed from the standard settings used on other continuous-filament yarns. Our tension-control methods have proved to be so satisfactory on Bemberg yarns that we plan to adapt them to any other types of filament-rayon yarns that we may run later.

Keep Yarn Processing Under Constant Atmospheric Control

Relative-humidity standards are set up for each department, and the readings are checked often and held constant.

Yarn is stored in the original packing cases in a warehouse where the temperature is always held to 50° F. or higher. No humidification system is used in the warehouse.

Before warp or filling yarns are used, they are removed from the storage warehouse and opened in the throwing or winding department. Warp yarns are left open for 24 hrs. at 65% r.h. and 80 to 82° F. These atmospheric conditions are held throughout warp-yarn processing up to slashing.

Filling yarns are handled in climatic conditions much the same as warp yarns except that the relative humidity is only 60% (5% lower than that of warp yarns).

All Bemberg yarns, both warp and filling, are conditioned in steam boxes to set the twist. Temperatures of 150° F. dry bulb and 130° F. wet bulb are used. The conditioning process is rapid since little time is needed to set the twist. We are careful to avoid too much humidity.

The weave-room temperature is held at 82 to 84° F. Relative humidity is kept at 68 to 70%.

Check the Yarn Tension With Instruments at Each Machine

Bemberg yarns cut into guides, flyers, and other surfaces more readily than other types of yarns; and as a result, we check these surfaces regularly for rough places that might injure the yarns.

In spool winding on Sipp-Eastwood automatic winders, we use an open wind. In uptwisting, we use a close wind.

Packages of 1-lb. capacity are used on Atwood, Fletcher, and Universal twisters; 1½-lb. packages are used on Unirail uptwisters.

We use 5% more tension on Bemberg filling yarns in winding than the standard amount used on other filament-rayon yarns because Bemberg yarns tend to slide through the tensioning devices when the machines are running.

We use a 7, 9, or 11 traverse wheel to give a five or seven wind. The stroke is from 1⅝ to 1¾ ins. long.

Now that we check the tension on each individual end regularly on both warp and filling yarns, we do not have shiners in the finished cloth.

Bemberg Yarns Require More Tension Than Other Yarns

Tension meters are used to check the tension on ends at the warper creels. On Bemberg yarns we use

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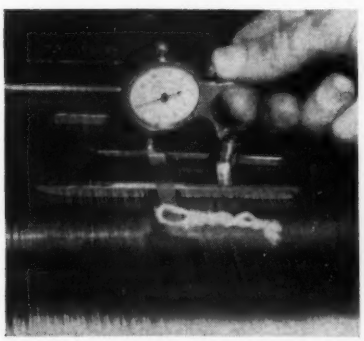
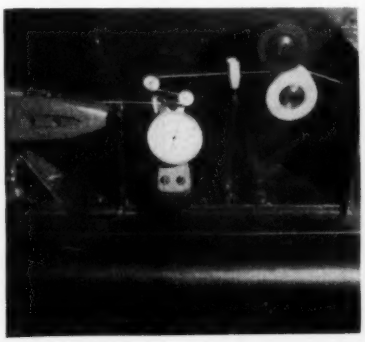
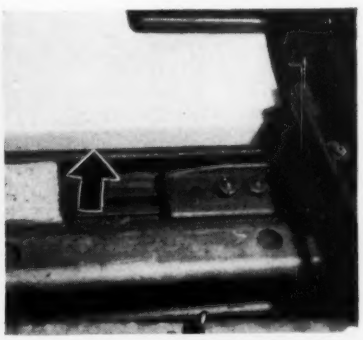


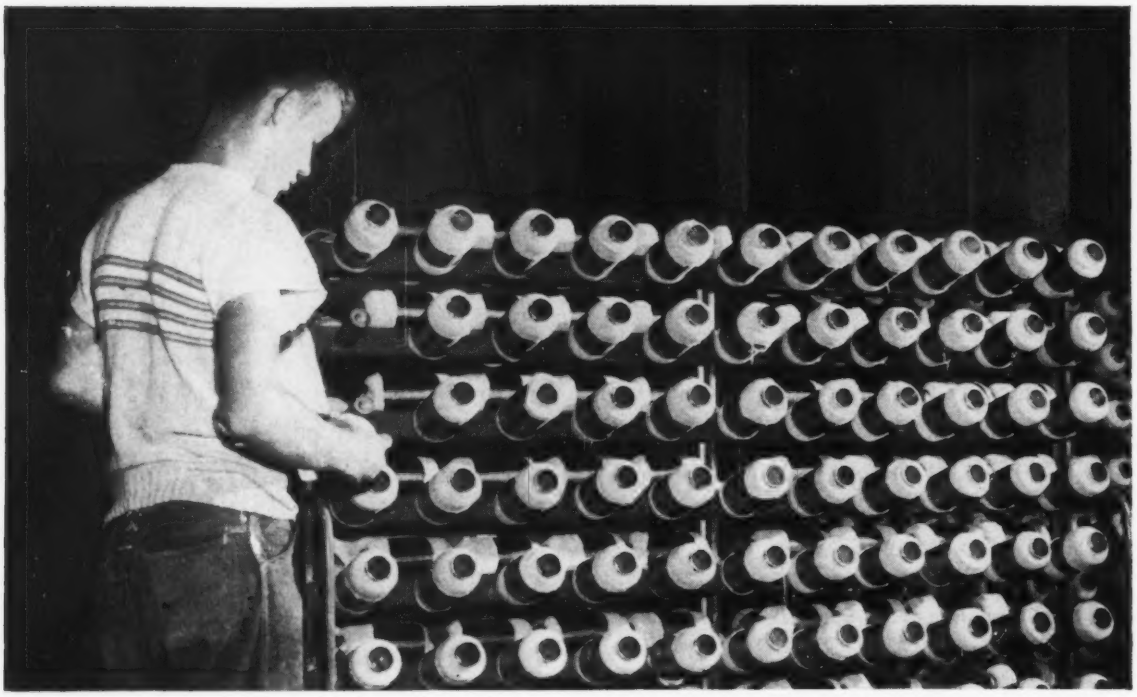
TENSION CHECKS are made daily to see that the warp tension at the loom remains constant. The ends in the braided twine are counted according to denier. The amount of warp tension is regulated by a checklist.



FILLING-TENSION CONTROL is assured through the use of a Tension-Rite instrument to check the tension on all shuttles at least once each week. Better cloth and better fork and thread-cutter operation result.



THE CLOTH on all Draper looms is threaded around the angle iron just inside the breast-beam to cut down on backlash at the beat-up. Bemberg fabrics woven this way have a better face.



FILAMENT YARN is wound on 1⅝-in. stainless-steel tubes fitted with extra-long knit socks. Socks are folded back over the package to protect and hold yarn in place.

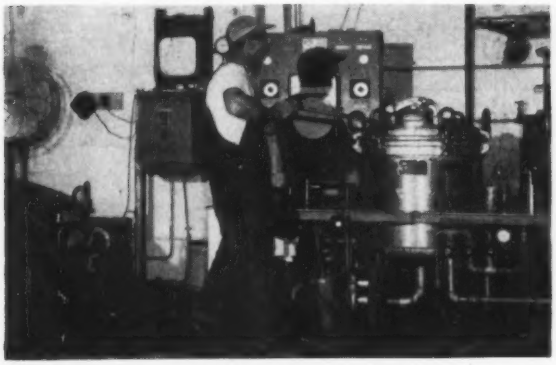
How Tryon Handles

► Dyeing of novelty yarns is a problem usually avoided by production dyehouses. Tryon Processing Co. makes a business of these difficult jobs.

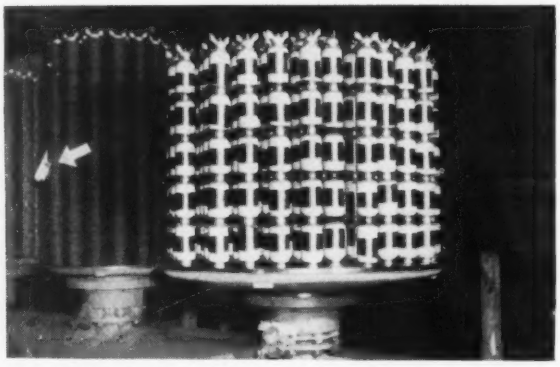
► Special equipment and operating techniques have been developed to simplify the work and produce quality yarns.

By GEORGE M. MOISSON

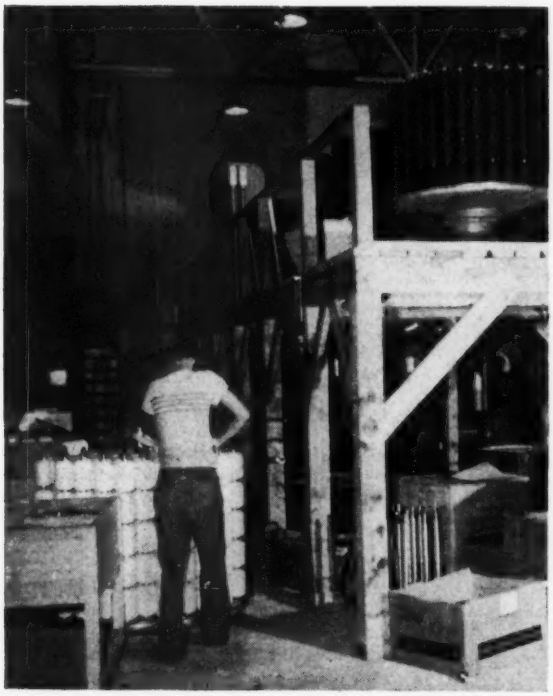
At Tryon Processing Co., Tryon, N. C., novelty-yarn dyeing is the specialty of the house. Routine pack-



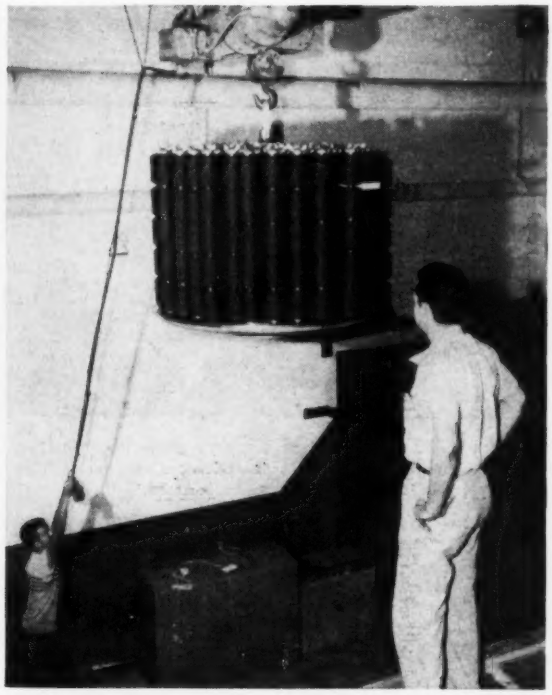
PRESSURIZED-DYEING EQUIPMENT makes possible the handling of all types of high-temperature dyeing. Small lots are handled in the 50-lb. machine at right.



PORT DRYERS handle carriers of yarn from all dye kettles. Dial thermometer (arrow), inserted into yarn package, will indicate when yarn is dry.



ELEVATED PLATFORM provides a working stage around package-dyeing equipment. This arrangement gives maintenance crews ample room to service pumps and motors below.



ELECTRIC HOIST mounted on overhead tracks makes handling of heavy loads safe and convenient. All loading and unloading of carriers is done at floor level.

NOVELTY-YARN DYEING

age dyeing of ordinary yarn and blends is the side line. High-pressure equipment of the latest type enables the firm to process the newer synthetic fibers.

Winding equipment at Tryon is capable of handling yarn in any package. Filament yarns and spun yarns can be packaged dyed, if the desired colors are dyeable on package machinery.

One technique used in the winding room eliminates some of the problems of package-dyeing filaments. An extra-long knit sock is used (on 1⅜-in. steel tubes), and the overhang is folded back over the package after winding. This method holds the yarn in place during handling and prevents tangling. To prevent snagging during backwinding after dyeing, Tryon tucks the overlap of sock down into the tube and inserts a steel separator collar into the tube. The yarn then has a smooth guide for over-end winding.

A special cart, with individual pegs for each package, is used to carry the yarn from the winder room to the dyehouse and back after drying. The filament yarn packages thus are never piled on each other or deformed in any way.

Acetate filament is spaced dyed in one to four colors in specially designed compartmented machines. Alternate segments of the skeins can be dyed different colors, in segments 2 to 8 ins. in length.

Resist-dyed acetate filament is dyed with alcohol-soluble colors in 3-, 7-, and 12-arm Smith-Drum Cascade machines. Evaporator equipment for alcohol recovery makes this otherwise uneconomic process possible.

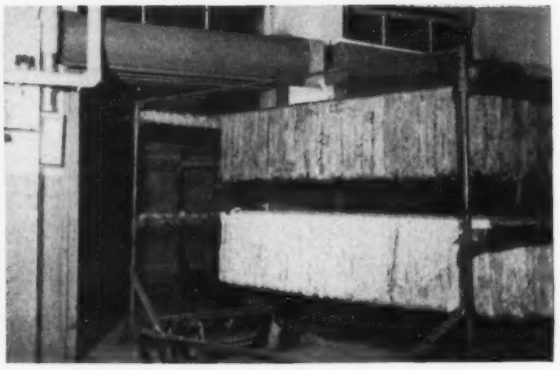
Skein dyeing by hand is necessary for some solid cross-dyed shades. Stainless-steel tubs equipped with dyesticks made of stainless tubing are used. The specially shaped dyesticks are used in pairs for each set of skeins and permit the skeins to hang completely submerged at all times between turns. This technique yields more-even dyeing and prevents premature oxidation of colors, a drawback of the old ash-sticks, wooden-tub method.

In the packaged dyenouse, an elevated platform provides a working surface around an all-new Gaston County-equipped setup. Vacuum extractor and port dryer are mounted at the same level. This arrangement permits convenient maintenance of pumps and motors. Electric hoists and American MonoRail equipment facilitate handling of the heavy carriers of yarn.

To prevent overdrying or underdrying of yarn, Tryon has made use of the dial thermometer in an unusual way: a thermometer is inserted into a package of yarn on the dryer. Another thermometer at the blower records the heat of the drying air. As long as there is moisture in the yarn, the dial thermometer is cooled by evaporation. When the yarn is dry, the two ther-

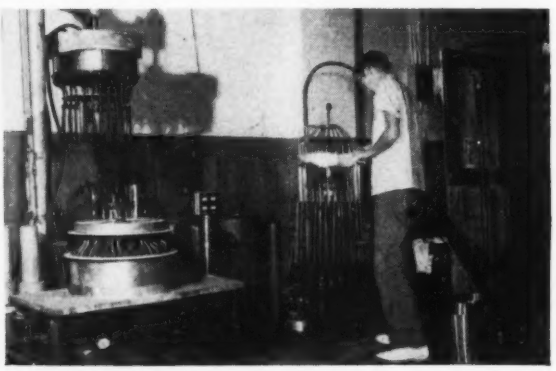
Novelty-Yarn Dyeing *(Continued)*

SKEIN DYEING in vats or tubs is still necessary for some types of yarn. This arrangement of two specially shaped rods for each set of skeins prevents tangles and keeps yarn submerged.

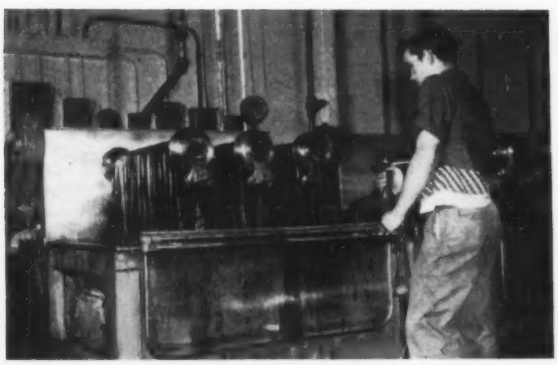


OVEN DRYERS are used to dry all skein-dyed yarns. Heaters and circulating fans are capable of creating an even 300° F. for relustering Dynel and Vinyon after dyeing.

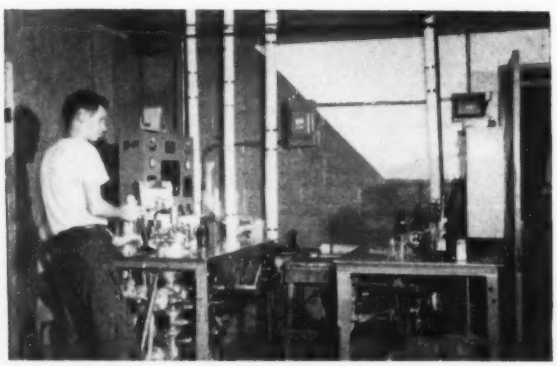
BLOCK-DYEING MACHINE dyes exposed portions of skeins mounted on a carrier. The blocked-off portions remain undyed. A dyed skein hangs on the post behind the operator.



SPACE-DYEING MACHINE handles 44-in. skeins and will dye up to four colors in 2- to 8-in. spaces. This machine is specially made. Carrier (right) fits into the machine at left.



RESIST DYEING of acetate yarn is done in alcohol solution. This three-arm Cascade machine handles the low liquor bath economically.



LABORATORY PACKAGE-DYEING MACHINES are used constantly to keep up with the numerous shades required.

mometers will read nearly the same.

The quality-control section constantly checks dyeing and winding. Each lot is inspected for levelness of color and fastness of dyeing.

Latest techniques are studied and production quantities of the new synthetics, both alone and in blends, have been run. Filament Orlon, Dacron, and nylon are dyed in lots of 21, 98, 210, 420, 840, and 1,260 lbs. Tryon stocks quantities of filament yarns of acetate, rayon, nylon, Dacron, and Orlon. Spun yarn and blends are handled only on contract.

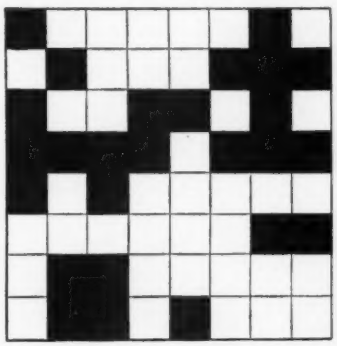


Fig. 1

RANDOM DISTRIBUTION of single-fiber elements in a 50-50 blend produces this effect in the yarn cross section. There is no way to insure perfect separation of each fiber element.

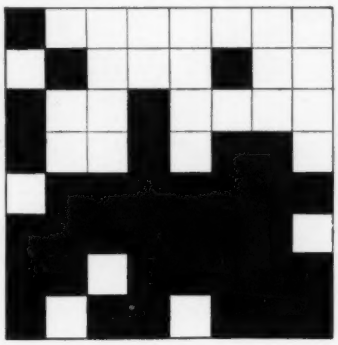


Fig. 2

DOUBLE ROVING, one black and one white, can be expected to give this poor degree of blending effectiveness in the yarn. The appearance of the yarn is nearer to a twist effect than to a blend.

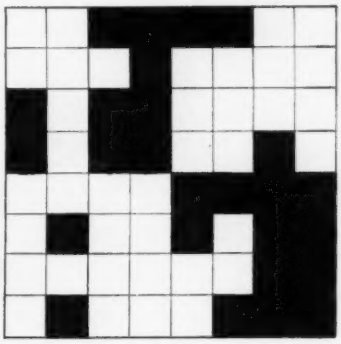


Fig. 3

FINISHER-DRAWING BLEND can be expected to have this effect on the final yarn if there are eight ends up at each drawing process and double roving in spinning. This blend is not ideal and would be too streaky for normal fabrics. This technique is sometimes used for deliberately streaky effects.

Tips on BLENDING FIBERS

- **Breaker-drawing blends, although not perfect, are about as good as you can get**
- **For good blending, finer yarns need fewer doublings but finer fibers need more doublings**
- **Moisture content has little effect on blend uniformity**

By GEOFFREY V. LUND, Courtaulds, Inc.

ALTHOUGH PRESENT PROCESSING MACHINERY will not make a perfect blend, any manufacturing system that breaks down groups of fibers into single-fiber elements can be used to make acceptable blends. From this basic point, we can derive specific recommendations regarding the best place to blend and the effects of staple length and fiber diameter.

In a single-process lap-forming system such as is generally used for cotton and spun synthetics, blends can be made in four places:

1. Before opening
2. In drawing
3. In roving
4. In spinning

The card does not mix fibers completely at random, but it does break up fiber bunches very well. Groups of fibers in a blend must be broken down into single-fiber drafting elements before satisfactory blending can take place. After this breakdown has been accomplished (on the card, for instance), blending can be done in a later process with good results.

Theory of Blending

A theoretical picture of a 50-50 black-and-white blend in which fibers are distributed completely at random is shown in Fig. 1. This blend, although far from perfect, would be acceptable. It is impossible to have a white fiber between two black fibers along all possible lines through the yarn cross section. If blending is done before carding, a fiber distribution similar to this one can be expected.

Fig. 2. represents what might be expected from blending in spinning. The example assumes one black roving and one white roving, both of the same hank. The blend is obviously less than ideally intimate.

A blend made at the last drawing process is illustrated in Fig. 3. There were eight ends up, and the yarn in the example was spun from double roving. This blend is also less than the ideal, but it is not so obviously far away as is that illustrated in Fig. 2.

A blend made at the first drawing process, with eight ends up at both drawing processes and double roving in spinning, can be represented by Fig. 1, a random distribution of single-fiber units in the yarn.

Effect of Doublings

When drafting takes place smoothly, good blending (a random arrangement

Based on a paper presented at the spring meeting, Textile Div., American Society for Quality Control, at the School of Textiles, N. C. State College, Raleigh, N. C.

Why Streaky Yarn?

Fine yarns appear more streaky than coarse yarns when the yarns are spun from similarly proportioned blends of similar fibers.

If yarn number is the same, yarns spun from coarser deniers are more streaky.

Unbalanced blends such as 90-10 produce streakier yarns than balanced blends in yarns of the same number.

A good way to get a deliberately streaky effect is to include a small percentage of distinctly different-color fibers of a coarser denier than the rest of the blend.

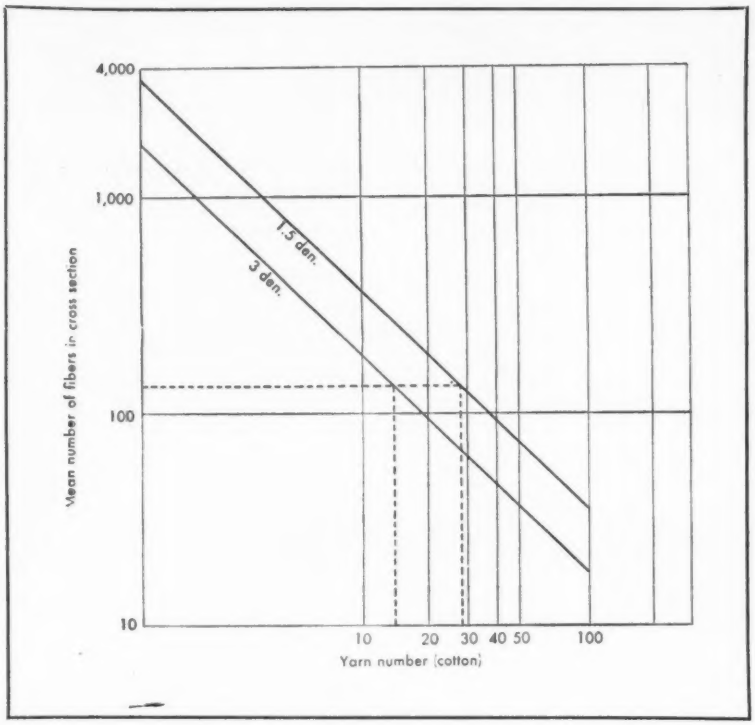


Fig. 4

EFFECT OF DENIER on the number of doublings necessary to spin an acceptably blended yarn is shown here. A finer yarn can be spun from a finer denier with the same number of doublings. The conventional 128 doublings are enough to spin a 14s yarn from 3-den. or 28s from 1.5-den. stock.

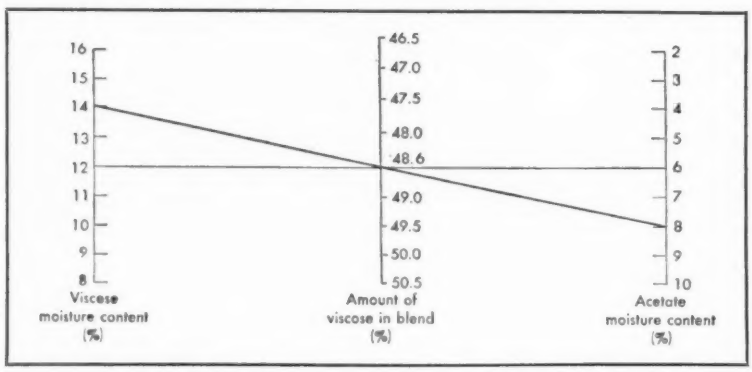


Fig. 5

MOISTURE CONTENT of the fibers being blended has little effect on blend proportions. In this example of a 50-50 viscose-acetate blend, if the viscose is 4% too wet and the acetate 4% too dry, the amount of viscose in the blend drops only to 46.5% from 48.6%, both on a bone-dry basis.

of single-fiber units) can be expected as soon as the number of doublings exceeds the number of fibers in the cross section of the yarn. Finer yarns, therefore, need fewer doublings to get random fiber arrangements when only blending is considered.

In finer yarn numbers as conventionally spun, there is no need to worry about the intimacy of the blend. The conventional process should insure that the fibers are distributed at random across the yarn if the doublings follow carding or combing that effectively breaks down groups of similarly colored fibers into single-fiber drafting elements.

As finer fibers are used, more doublings are needed to get a good blend in a given yarn number. This relationship is illustrated in Fig. 4. The usual 128 doublings (8x8x2) after carding are sufficient to give uniform blending in 14s (or finer) yarn made from 3-den. fibers or 28s (or finer) yarn made from 1.5-den. fibers, providing the fibers have had good carding or combing and you use breaker and finisher drawing with eight ends up at each, double-roving spinning, and good drafting (that is, not drafting in groups).

With fibers of similar staple length and frictional properties, there should be little difference between card and draw-frame blends in the finer yarn numbers. Poorer blending must be expected from the draw-frame blends when coarse numbers are spun. There should be a considerable difference between the two methods when 6s or 9s are spun. Such yarns are usually spun from single roving; so the 64 doublings are considerably less than the number of fibers in the cross section.

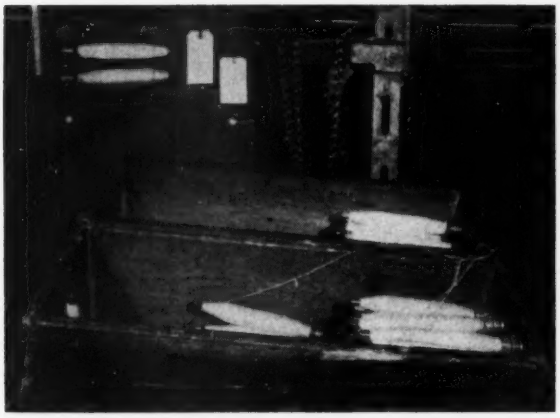
Blend intimacy is not critical for 3-den. fibers spun in the range of 14s to 24s, but good blending is more difficult for 1.5-den. fibers spun to coarser numbers.

Watch Long-Term Differences

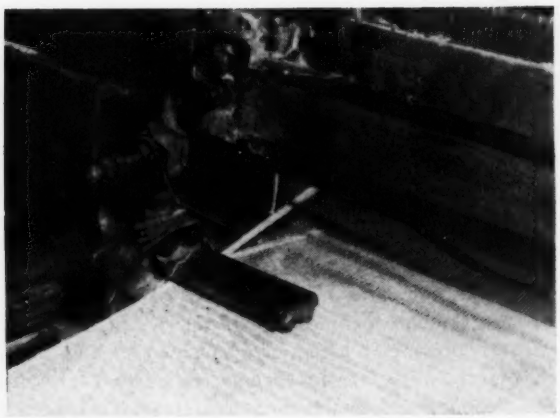
So far we have discussed only the intimacy of blending as reflected in the yarn. Another important problem is the maintenance of correct proportions in the blend throughout the processes. The points to watch in this connection are weighing, moisture content, and bunching.

All methods of proportioning raw materials, whether by weight or by volume, require adequate checking of the measuring device. The checking interval depends upon the reliability of the system, but regular checks should be made. It is always wise to check, for instance, to see that a

CONTINUED ON PAGE 311



DOZENS OF COLORS and types of filling are included in the 250 styles of cloth on the group of 616 looms. A sample of each type of filling being run in each loom is fastened to a board directly over the filling storage box to help prevent mixed filling.



THE "CROWHOP" to catch the loose filling ends on this dotted-swiss style receives its motion from a bumper on the lay near the shuttle guide. All the warp ends are on one beam, and the clip-spot is put in filling-wise from a shuttle in the No. 2 shuttle box.

SCHEDULED STYLE CHANGING
Keeps Looms Running

► Changing an average of 70 to 80 warps every week to different patterns doesn't greatly interfere with weave-room efficiency at Hathaway Mfg. Co. Weave-room supervisors check their looms for warp run-outs a shift ahead and schedule warp replacements so that there is no time lost in waiting. Steps in scheduling the changes include—

- **Inspecting warps in the looms for run-outs before supervisors change shifts**
- **Checking the expected run-outs against a planning-department schedule**
- **Ordering new warps to be delivered at a given time**
- **Setting looms to standards determined by written records**

A SCOREBOARD for loom stops is made on the loom arch by stenciling it with the most common loom-stop faults. Several chalk marks at false stops or bang-offs show that the loom needs mechanical attention. The scoreboard is checked once each shift.

By RICHARD B. PRESSLEY, Associate Editor, TEXTILE WORLD

IN ONE WEAVE ROOM containing 616 C&K C-6 looms at Hathaway Mfg. Co., New Bedford, Mass., the number of different styles of cloth normally averages 250. The styles include men's fine-count shirtings with leno strips, dotted swiss, clip-spot lenos, gingham and other plaid sport shirting and dress goods, and numerous other weaves.

Warp and filling yarns vary in number from 4s to 60s. Novelty-flake and ratine fillings of several designs are also run. Looms running multicolor warps and up to four colors of filling are mixed in with looms running solid-color warps and filling.

Scheduling Is for a Purpose

Styling the looms for the 250 different weaves, keeping the looms in good physical condition, and developing and maintaining the best loom settings for each style of cloth are the major problems in this weave room.

Normally, 70 to 80 new drawn patterns are placed in the looms each week, but occasionally the patterns replaced run as high as 126 a week.

CONTINUED ON PAGE 276

A DOFFED-CLOTH STAND, one to every four looms, is used by the cloth doffer to stand a roll of cloth on end when it is taken out of the loom. The cloth is not allowed to touch the floor.

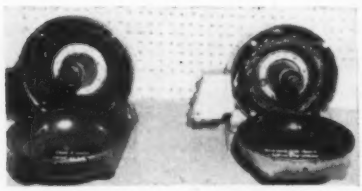
Ideas from

The Plant Maintenance and Engineering Show

► Here is the Fifth National Plant Maintenance and Engineering Show as seen through textile eyes. Of the hundreds of exhibits, these had the greatest present or potential application to textiles. The show was held in Chicago, Ill., late in January, in conjunction with the annual Plant Maintenance and Engineering Conference.

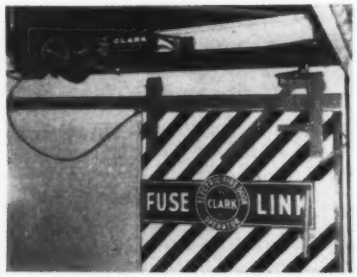
► The items reviewed here offer many opportunities for textile mills to cut maintenance costs and improve maintenance efficiency.

A NEW FASTENING TOOL that sets ⅜-in. heavy-duty fasteners into hard concrete or steel up to 1 in. thick was shown by Ramset Fasteners, Inc., 12,100 Berea Rd., Cleveland 11, Ohio. The new tool, shown being used by TW's Dick Pressley, costs about $150 and eliminates star drilling and plugging in concrete. One man can make about 50 fastenings in an hour with this equipment—the tool, special fasteners, and powder charges.

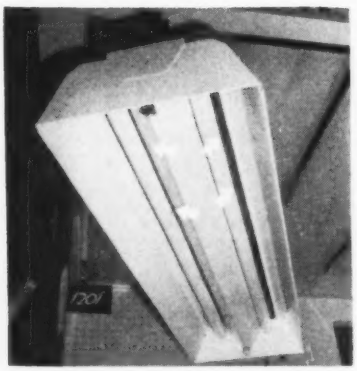


SILICONE MOTOR WINDINGS were demonstrated by Dow Corning Corp., Midland, Mich. Motors with windings treated with silicone are said to last longer. The company also claims that motor horsepower can be increased when silicone-treated windings are used. Results of these motors are: greater reliability, lower maintenance costs, and more overload capacity. Water inside the motor cannot affect good operation.

►A new liquid synthetic detergent—Cindet—was shown by C. B. Dolge Co., Westport, Conn. The detergent is said to be particularly effective in hard water. The product is safe for all surfaces and can be used on floors or walls.



AN AUTOMATIC FIRE-DOOR OPERATOR was presented by Clark Door Co., 182 Rose St., Newark 8, N. J. The device is electrically operated and can be actuated by floor plate, push button, pull cord, or photoelectric cell. A fusible link disengages the opening system from the door in case of fire.



A NEW LIGHT FIXTURE that allows 25% of the light to go above the fixture was shown by The Miller Co., Meriden, Conn. The uplighting feature is designed to eliminate the drastic effect of wall-lighted working areas and dark ceiling areas above the fixtures. The uplighting fixtures are available in two-light units in both rapid-start and slimline models.

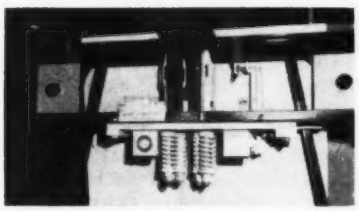
The Miller Co. also showed a dust- and vapor-tight fixture that has a glass cover. The unit has already found application in dyehouses and might also be used where dust or line presents problems.

PORTABLE PIPE MACHINE, the Featherweight Champ, is power driven and can be carried by one man because it weighs only 75 lbs. The tool is used for threading, cutting, and reaming pipes. Designed to be taken to every department in the mill, it is sturdy enough to be used on production work in the machine shop. Your old dies can be used with the tool. Specifications of the machine are: standard range of pipe cutting of ⅛ to 2 ins., ½-hp. continuous-duty motor, and spindle speed 22 to 36 rpm. average. Price is $235. The machine is made by The Oster Mfg. Co., Cleveland 3, Ohio.

PLANT LAYOUTS that eliminate the need for expensive drafting were shown by Visual Plant Layouts, Inc., Oakmont, Pa. Accurate scale models of all production equipment and anything else that requires floor space are made first. Then the models are placed on a 3-D layout and a film template is made. Final prints are made from the film template, and total cost is said to be about 7¢ per sq. ft.

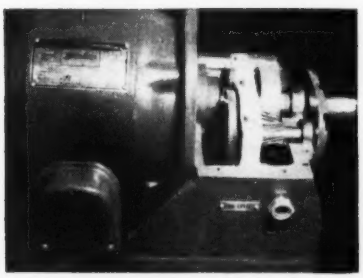
►A longer-lasting roof coating for metal and smooth-surfaced built-up roofs contains no volatile solvents. You can put it on over a wet roof. In fact, the manufacturer, Philip Carey Mfg. Co., Lockland, Cincinnati 15, Ohio, recommends that you spray your old roof with water before using the Flextop roof coating. The one-coat material is designed to go on old or new roofs and can be spread as thick as 3 gals. per 100 sq. ft. Other claims for the roofing are no blistering, cracking, or flaking. Because of its uniform erosion characteristics, there's said to be no "alligatoring."

AIRPLANE-WING BLADES are the outstanding feature of this new fan shown by Chicago Blower Corp., 9867 Pacific Ave., Franklin Park, Ill. The hollow blades use airfoil principles to deliver a large volume of air at high speed and with little noise. Fan efficiencies are said to be over 90%. Wheels of 12- to 123-in. diameter can deliver 600 to 750,000 cu. ft. per min. at ⅛ to 32 ins. static pressure. Fan characteristics are said to make this type particularly suitable for air-conditioning systems and both induced- and forced-draft applications.

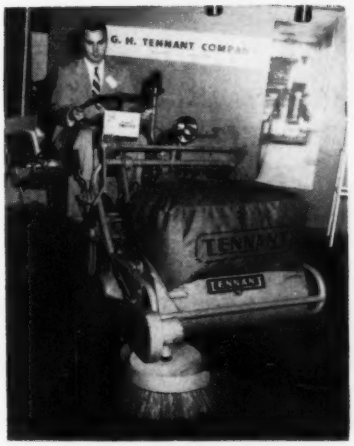


ELEVATOR SAFETY is the aim of this load-limiting device shown by Montgomery Elevator Co., Moline, Ill. The Load Limitor weighs the load, warns as overload approaches, and prevents elevator operation when overloaded. On automatic elevators, the device enables a loaded elevator to bypass calls when there isn't any more room. Cost is about $700, and the device can be installed on any make of elevator.

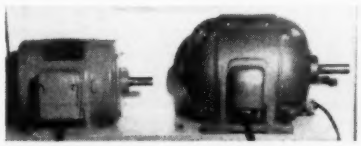
A new magnetic leveling unit was also shown by the same company. The unit features greatly increased sensitivity and greater vane clearance.



GEAR MOTORS of the one-unit, packaged, variable-speed type for slasher and card drives were shown by Westinghouse Electric Corp., 401 Liberty Ave., P. O. Box 868, Pittsburgh 30, Pa. The drives are said to eliminate long center distances between motors and driven machine because the speed-variation controls are built right into the motors. The gear motors are furnished in horizontal- or vertical-type frames and come in sizes of 1 to 75 hp. Speeds range from 7.5 to 780 rpm.



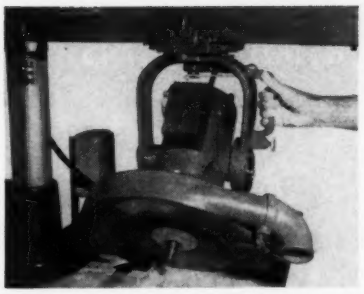
A POWER SWEEPER with many improvements was shown by G. H. Tennant Co., 2530 N. Second St., Minneapolis 11, Minn. A new two-speed transmission delivers one-third more speed in high gear and gives improved brush and vacuum action at low forward speeds. A 44-in. spread-V-type scoop collects bulky debris. Weekly mileage is recorded with a 1,000-mile-capacity odometer. An hour meter records the hours (up to 10,000) the engine runs to help schedule machine maintenance. The need for push brooms along walls is eliminated by the addition of a side-sweeping brush that sweeps flush with walls. Back-up lights for outdoor operation and a blinker light for dimly lit areas are also being used on the new machine.



SMALLER ELECTRIC MOTORS with no loss in horsepower ratings were shown by General Electric Co., Schenectady, N. Y. Up to 33% weight reduction was made by eliminating all wasted space between stators and frames. Other features of the motors are: polyester-film slot and phase insulation, press-fitted stator punchings, permanently numbered leads, easy access to conduit box, double-end ventilation, water-shedding stator windings, and solid-cast rotor windings.

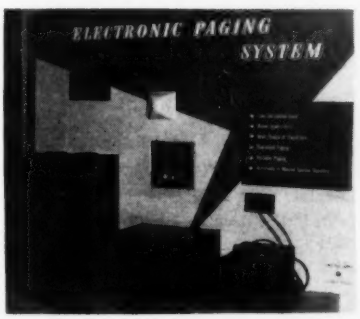
The larger motor shown above is encased in an old frame. The small motor is of the same horsepower but employs space saving between the stator and frame.

THREAD-GUARD CASTER shown by the Fairbanks Co., 393 Lafayette St., New York 3, N. Y., has double balls in the swivel race. The wheels have ball bearings and a tightly fitting thread guard to prevent entrance of loose threads and lint. The steel treads of the wheels are claimed to prevent scratches on hardwood floors.



SWING IT, SPIN IT, AND TILT IT. That's what DeWalt, Inc., Lancaster, Pa., says you can do with a new multipurpose bench saw. You can swing the saw for miter cutting, spin the saw for ripping, and tilt it for bevel cutting. The saw has an automatic safety lock to brake the motion of the carriage holding the cutting head when the thumb pressure of the operator is released from the plunger. Sizes begin at 2 hp. and extend through 5 hp.

PREFORMED SPINDLE BUMPER STRAPS were exhibited by Graton & Knight Co., 356 Franklin St., Worcester 4, Mass. The straps are mounted on hardwood dowels at the Graton & Knight plant. When a loomfixer needs to install a new strap, he presses the end of the picker rod against the dowel and the picker rod slides through the strap as the dowel slides out. As a result, the company claims, bumper straps aren't damaged in being installed at the loom, and long bumper-strap life results.



THIS PAGING SYSTEM specializes in pinning down floating personnel—superintendents, overseers, watchmen, etc.—and is manufactured by International Business Machines, 590 Madison Ave., New York 22, N. Y. When the person is located, a supplemental signal is also used to give the reason for paging, such as "Local or long-distance telephone call," "Report to office," "Visitor or customer waiting," and others. Start-and-stop signaling to indicate the beginning and end of shifts also can be sounded with the system. Operation may be manual or automatic by program.

CONTINUED ON PAGE 296

CHEMICAL FINISHING TECHNIQUES*

SOFTENING, WATER REPELLENCY, SHRINKAGE CONTROL

Fabrics can be made much more versatile and useful by a wide range of chemical treatments. In this article, the author tells what chemical agents to use and how they do their work to make fabrics softer, water repellent, or shrink resistant.

By **A. C. NUESSLE,** Rohm & Haas Co.

Softening Agents

Softening agents are materials that lubricate fibers so that they can more readily slide past each other as the fabric is flexed.

The best softeners are oily or waxy materials that coat the surface of the fibers. Materials that penetrate into cellulosic fibers and plasticize them—for example, glycerol and urea—are relatively ineffective as softeners. Therefore, most softeners are oils or waxes of relatively high molecular weight that have been suitably solubilized for easy application.

One of the earliest softeners was tallow, a natural-occurring substance composed of glycerol in combination with fatty acids having 16 to 18 carbon atoms. By treatment with sulfuric acid and neutralization with caustic soda, a water-soluble "sulfonated tallow" could be formed. This type of material is still used considerably.

Similarly, the majority of the many softeners now available under a variety of tradenames are based on some type of fatty hydrocarbon. Generally, a straight hydrocarbon chain has greater softening efficiency than a branched one; and the longer the chain, at least up to 18 carbons, the better the softener. Among the most effective raw materials are stearic acid (a saturated straight-chain $C_{17}H_{35}COOH$) and related compounds.

The solubilizing groups may take a variety of forms, including anionic, cationic, and nonionic types. By way of illustration, representative formulas for several softeners, with the hydrocarbon portion indicated by the brackets, are:

$[C_{16}H_{33}]—OSO_3Na$ (anionic)

$$[C_{17}H_{35}]—CONHCH_2CH_2N\begin{matrix}CH_3\\ \diagup\\ \\ \diagdown\\ CH_3\end{matrix}—HCl$$ (cationic)

$[C_{17}H_{33}]—COO(CH_2CH_2O)nH$ (nonionic)

The group outside the brackets in each case serves primarily to solubilize the molecule. It may, however, exert some influence on the degree of softness attained, possibly through controlling the orientation of the molecules on the fiber. More important, it exerts a major influence on substantivity, which allows application by exhaustion and imparts some durability to washing. In general, the nonionics have little or no substantivity, the anionics are substantive only on wool, and the cationics have affinity for all fibers.

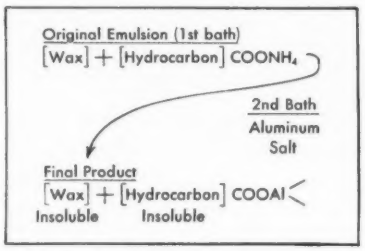


Fig. 1—Old two-bath water-repellent system in which an aluminum salt is used to insolubilize the ammonium soap

Complex Softeners

The following molecule shows the

* Second article in a series of four. The first article, "Stiffening Agents and How They Work," appeared on page 86 of the March issue of TEXTILE WORLD.

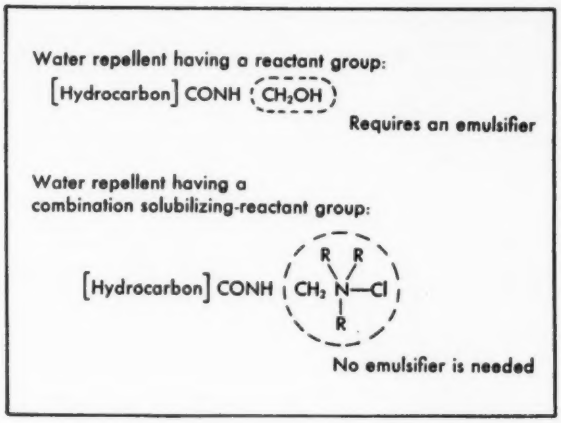


Fig. 2—Water repellents capable of reacting with cellulose

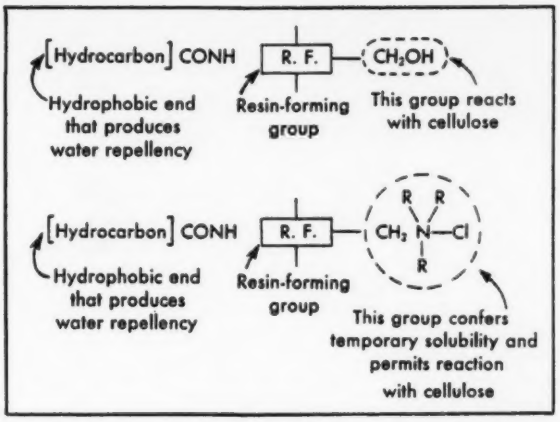
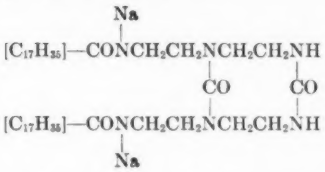


Fig. 3—Water repellents form a hydrophobic resin bonded to the fabric

complicated form that solubilizing groups sometimes take:



This softener, which is anionic, is said to be substantive, to resist yellowing with heat, and to have no effect on the lightfastness of dyes. All these advantages are provided by the part of the molecule outside the brackets.

Another type of softener that does not fit completely into this picture is exemplified by the soft polyester composed of a number of acid and alcohol molecules reacted together to form a linear polymer. Properly emulsified and applied to fabric, such a material imparts a soft fullness that bears little resemblance to the slick hand obtained with the more efficient of the cationic softeners. This soft-polyester type, which is not substantive, may nevertheless have a reasonable degree of washfastness, since the polyester is insoluble in water.

When softeners are used along with stiffening agents, they sometimes serve as plasticizers; that is, the softener mixes intimately with the starch or other stiffener and causes it to form a more plastic film. In other cases, softeners appear to operate by reducing the adhesion of the stiffening agent to the fiber.

Water Repellency

It has been shown that if a long, waxy hydrocarbon chain is solubilized and applied to fabric, the fabric is softened. If a way can then be found to destroy the solubilizing group so that only the hydrocarbon end of the molecule remains effective, the fabric will be water repellent. This effect, like stiffening and softening, is also a surface effect that takes place on the outside of the fiber.

There are a number of ways of accomplishing water repellency:

1. In the old two-bath water-repellent treatment, paraffin wax was emulsified with a water-soluble ammonium soap and applied to fabric. After-treatment with aluminum acetate or a similar salt formed an insoluble aluminum soap that, together with the already-insoluble wax, made the fabric quite water resistant. The action is indicated in the accompanying formula illustration.

This finish was not very washfast, since on repeated soapings the paraffin wax would be re-emulsified and washed off the fabric.

2. In an attempt to fix the hydrocarbon more firmly in the fabric, methylol stearamide was produced (see the upper half of the second illustration). This agent was composed of a hydrocarbon chain plus a group

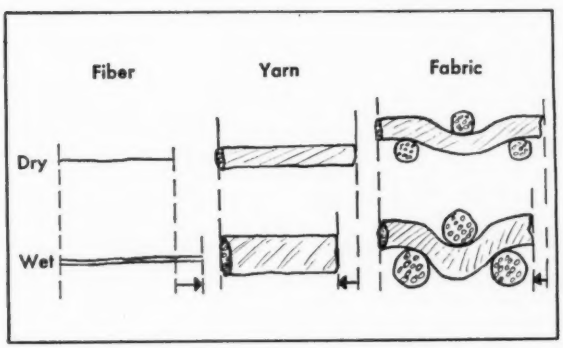


Fig. 4—Relation between fiber swelling and fabric shrinkage

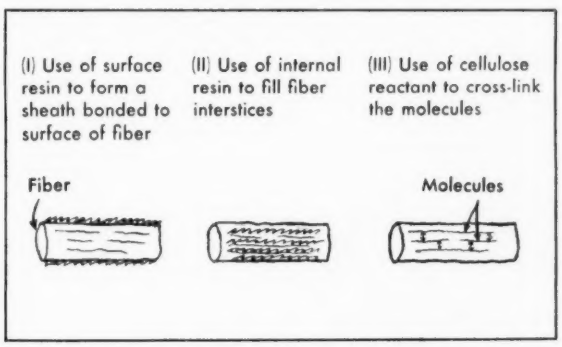
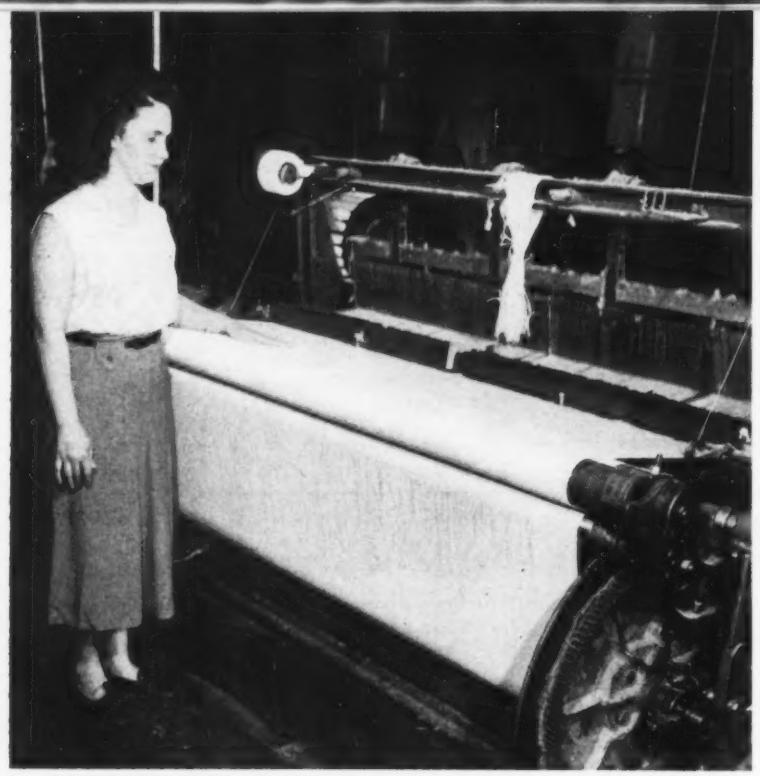

(I) Use of surface resin to form a sheath bonded to surface of fiber
(II) Use of internal resin to fill fiber interstices
(III) Use of cellulose reactant to cross-link the molecules
Fiber
Molecules

Fig. 5—Methods of reducing shrinkage of cellulosic fibers



INSPECTION of both warp and cloth is an important element in any weaving job analysis, and sufficient time should always be allowed for it.

How To Determine WEAVER JOBLOAD

► To set up a weaver's loom assignment—make an accurate job description and analysis, and determine by timestudy exactly how long it takes to start a stopped loom

► Keep elements simple, separate the variable elements, determine frequencies of stops, and be sure to allow for adequate inspection by the weaver

Loom-Assignment Refinements

	60 looms	80 looms	100 looms
Interference	0.22 (%)	0.37 (%)	0.62 (%)
Delay	0.45	0.60	0.75
Warp outs	0.58	0.58	0.58
Fixing	2.80	2.80	2.80
Efficiency loss	4.05	4.35	4.75
Expected efficiency	95.95	95.65	95.25

FROM THIS TABLE it can be seen that varying the assignment from 60 to 100 looms has little effect on efficiency. The same can be true for quality; but planning, training, and good supervision are required. The physical layout of weaver sets and the styles in the sets must be planned, the fixer-weaver teams must be trained to handle properly increased jobloads, and supervisors must provide a constant follow-up.

By DONALD D. DEMING

BEFORE AN EFFICIENT ASSIGNMENT can be set up for weavers, a lot of spade work has to be done. The first job is to determine what weavers actually do. Each operation must be isolated and described in terms of time-study elements; then the element times must be determined. Before the assignment is calculated, the frequency of each type of loom stop must be determined and the appropriate allowance for inspection time must be made.

In the first phase, which is to isolate and carefully describe in writing each useful operation and exactly how it should be done, the basic data of MTM [Methods-Time Measurement, TW, Oct. '49, p. 122] is of value; but in the long run, the big problem is to determine what is done and how long it takes in starting a stopped loom. That is a problem for time, motion, and methods study.

Keep Elements Simple

There are many operations in the weaving job, and elements should be kept as simple and uncombined as practicable. This principle makes possible simpler, better-organized, and more-accurate timestudies. Elements can later be combined and any type of loom stop reconstructed without an overlap of time.

To illustrate this principle, let's break down the operation "repairing a broken warp end" into these elements: Piecing the repair yarn, drawing it through the harness and reed, starting the loom, and cutting off the loose end after the yarn is woven into the cloth. These operations can be broken down into timestudy elements and described as follows:

1. Walk to stopped loom

Description: The weaver proceeds without interruption or delay to a stopped loom.

Element begins: As the stopped loom is observed and the operator starts toward it.

Element ends: As the operator comes abreast of the stopped loom.

2. Find end

Description: The weaver searches for the cause of the loom stop; when it is found to be caused by a broken or slack end, he searches for the proper end.

Element begins: As the weaver stops in front of the loom and begins his search for the broken or slack warp end.

Element ends: As the end is found and held up preparatory to piecing the end.

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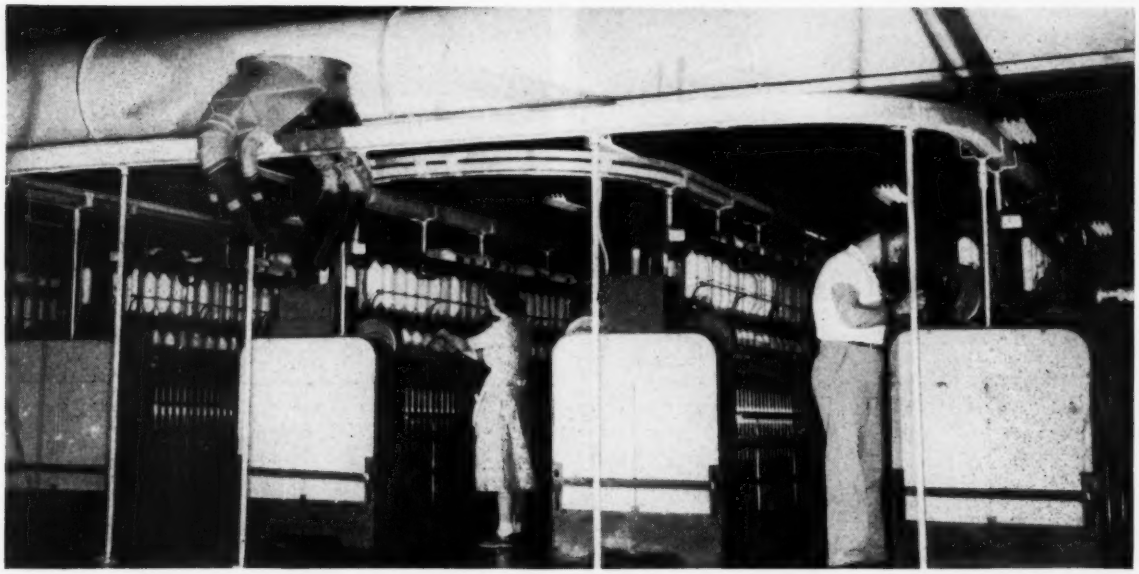


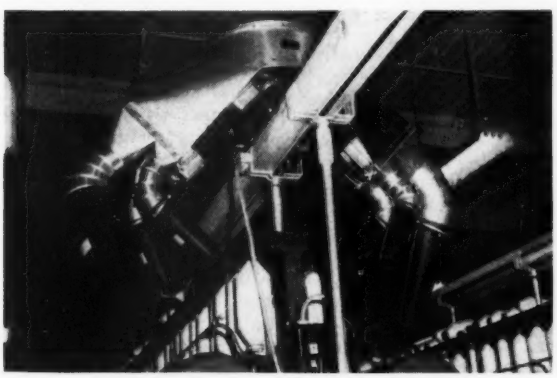
NEW-TYPE CLEANER runs on double U-shaped track over 12 spinning frames in 5½ mins. The track extension at one end of the unit allows the cleaner to run smoothly in one direction.

10-Way ADJUSTABLE CLEANERS Improve Spinning Efficiency

A new-type overhead cleaner installed on spinning frames:

- **Improves quality**
- **Reduces costs**
- **Eases spinners' work**

By JAMES P. SLOAN, Joanna Cotton Mills Co.



FLEXIBLE TUBES, adjustable to any angle, clean top and bottom roving, thread board, spindle rail, and ring rail. Two fixed openings clean the cleaner track and roving on the top of the creel.

A NEW TYPE OF OVERHEAD CLEANER installed over spinning frames at Joanna Cotton Mills Co., Joanna, S. C., cleans the top creel, bottom creel, thread board, ring rail, spindle rail, and cleaner track. Better yarns are made, and cleaning time is reduced.

The new traveling cleaner, known as Type CT, was built and installed by Parks-Cramer Co. and is constructed largely of aluminum. This construction makes the cleaner light in weight and easy to keep clean.

A ¾-hp. motor drives the cleaner continuously in one direction around a U-shaped track. The tracks cover twelve 272-spindle spinning frames. A circuit takes 5½ mins.

Old Cleaner Track Used

The track used for the old-type cleaner has been modified to take the larger new-type cleaner. An extension on the end of the track and additional braces on the spinning frames have improved the track so that the cleaners travel more steadily and without bumps.

The old-type cleaner had one air outlet directed toward each side of the frame to blow off the creel and part of the thread board. The new cleaner has 10 outlets. For each side of the cleaner, the two top outlets are fixed; but the three lower ones can be adjusted to practically any position.

The two sides of the cleaner are identical, and each has five air outlets. The top opening under the blower head keeps the blower track clean. A fixed opening on the underside of each arm directs an air jet on the creel top to prevent lint from settling on the roving waiting to be creeled.

Two adjustable nozzles direct air on the roving in the

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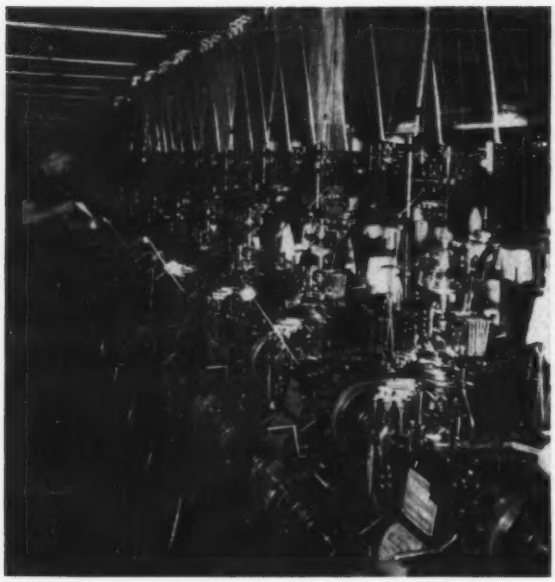
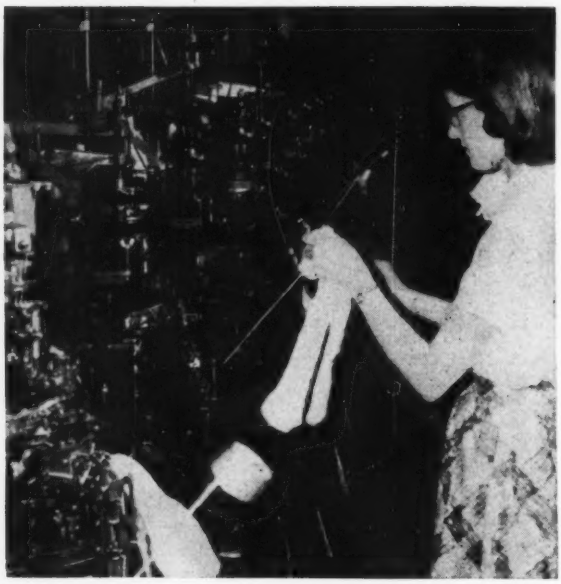


YARN STOP MOTIONS have cut press-offs and needle breakage to practically nothing. One knitter operates 16 machines.



BRASS CYLINDER on the end of the steel bar reduces rib stretching during inspecting and turning. Anklets are easily turned.

Modern Equipment Reduces HOSIERY COSTS

Crown Hosiery Mill keeps up to date with:

- **Sixty new automatic knitting machines**
- **Three pneumatic sock-turning machines**

By JAMES H. BLORE, Assistant Editor, TEXTILE WORLD

Crown Hosiery Mills, Inc., High Point, N. C., has added more modern equipment to an already up-to-date mill. The new equipment includes 60 Hemphill Banner ARA machines and three International sock-turning machines.

When four more knitting machines arrive, the battery of 64 machines will be tended by four knitters and two fixers.

The knitting machines are fully automatic and produce true-rib-top anklets. Sizes 5 and 6 are made on 144-needle machines and size 7 to 8½ on 160-needle machines. Each set will have eight 144-needle machines and eight 160-needle machines.

Two-ply mercerized yarns are used throughout the anklets, and the heels and toes are nylon-reinforced.

One Machine Set Knits 70 Doz.

The machines run at about 168 rpm. An extra-slow speed for the transfer course insures safe transferring of the dial-needle stitches to the cylinder needles. To eliminate large-size gears to get this slow speed, the inner pulley drives a grooved pulley through a V-belt drive. An average production of 70 doz. is obtained from 16 machines during each 8-hr. shift.

Each machine has an electrically operated needle-protector stop motion, and yarn stop motions built by Stop-Motion Devices Corp. are being installed. The first machine that Crown fitted with the yarn stop motions ran for three months with no press-offs, no cut-offs, and only two needle breaks.

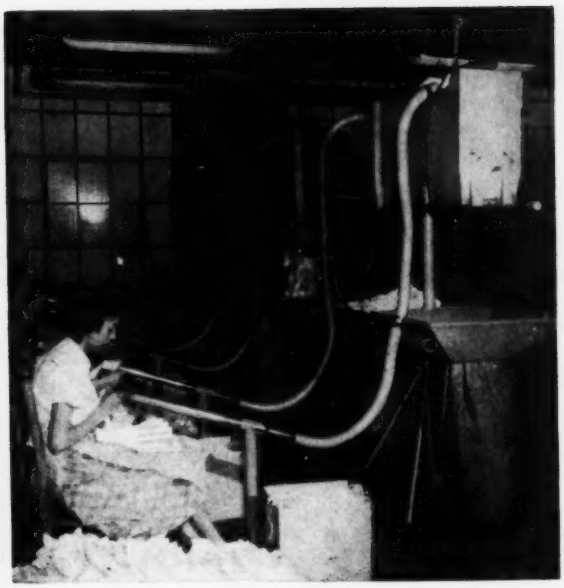
A device comes into action to apply tension to the fabric during rib knitting to give a clear loop formation in the rib.

Mill Device Reduces Stretching

The mill has fitted an attachment to some machines to eliminate the excessive stretching of tops by the knitters during turning and inspecting. The attachment consists of a steel bar screwed to the gear cover and a brass cylinder fixed to the end of the bar. The knitter pulls an anklet on the brass cylinder, cuts the draw thread above the welt, and pulls the draw thread. The anklet is pushed forward and drawn inside out off the device, ready for looping.

Each machine has a transformer to reduce 110-v. current to 12 v. A conduit running over the top of each drive

ELECTRICAL WIRING is made compact by a conduit over the line shaft. Transformers are fed from double sockets behind machines.



TURNING MACHINES have raised production to 750 to 1,000 doz. per operator per day. One-dozen lots are turned, counted, and bagged.

shaft houses the 110-v. supply. A double outlet at 3-ft. intervals behind each machine minimizes electric wiring. The conduit is supported by steel brackets fixed to each bearing support.

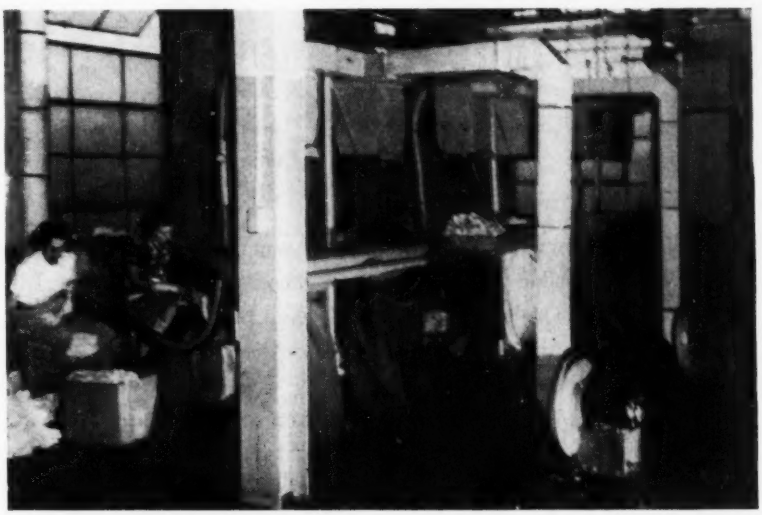
How Crown Uses the Turners

The hosiery turners are arranged side by side and form a compact unit in a well-lighted corner, with windows at the operators' backs. Each machine has two flexible pipes with brass hosiery-turning tubes at the lower ends to be used one at a time for different hosiery styles.

The anklets come from the loopers in 35-doz. lots, with each dozen tied with a looper clip and the toes all pointing the same way. The operator lays the dozen on her knee, with the cuff pointing to the tube, pulls the looper clip loose, and draws the socks down over the tube one at a time in rapid succession.

When she pulls an anklet to its full length on the tube, the operator loosens her grip on it and suction in the tube draws the anklet inside out and through the tube to a hopper. A counter fixed to the tube automatically counts each anklet as it is drawn through the tube.

When suction in the pipe becomes weak because of a full hopper, the operator trips a foot lever that pulls a string to shut off the suction. The hopper door, balanced with an adjustable weight and held in place by the suction, falls open; and the goods are dropped into a chute. At the lower end of the chute is a bag suspended by four clips similar to those used to keep screen doors closed.



ONE-HORSEPOWER MOTOR drives a fan that provides suction to the hopper. A foot lever shuts off suction to dump goods into a bag.

At the completion of each lot, the operator releases the clips, pulls the bag strings tight, and sends the bag to the dyehouse.

The hoppers and the chutes are supported on a 2-in.-pipe framework. A 1-hp. 2,900-rpm. motor drives a fan to provide the suction. Air is drawn through a duct at the rear of the hopper and blown out at the fan.

Filters Need Cleaning

A filter in the duct prevents lint and small threads from being blown into the room. The filter is cleaned when it becomes clogged enough to decrease the suction.

Production has been increased so that each operator turns out 750 to 1,000 doz. per day. Goods are dyed better because they are in a loose form, and time has been saved in the dyehouse because goods do not have to be untied.

Saves time...money
All steel from one source

When you combine all your steel requirements on a single order to Ryerson you cut costs in many ways. One call—one order—save purchasing time and you also simplify bookkeeping—reduce clerical expense.

In addition, combining most carbon steel purchases under the Ryerson quantity differential plan brings further savings. And with larger quantities you often effect substantial reduction in freight on long hauls.

All these economies are possible when you call Ryerson for steel because Ryerson stocks are the world's largest and most diversified. Carbon steel, alloys, stainless—no matter what analyses you need, no matter what shapes and sizes, you can be practically certain of getting them all with just one call to Ryerson.

You can be sure of prompt delivery, too. So next time you need steel, no matter how many kinds or sizes, call your nearest Ryerson plant.

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PLATES—Many types including Inland 4-Way Safety Plate
SHEETS—Hot & cold rolled, many types & coatings
TUBING—Seamless & welded, mechanical & boiler tubes
ALLOYS—Hot rolled, cold finished, heat treated
STAINLESS—Allegheny bars, plates, sheets, tubes, etc.
REINFORCING—Bars & Accessories, spirals, wire mesh
BABBITT—Five types, also Ryertex plastic bearings
MACHINERY & TOOLS—For metal fabrication

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How the Management Team Can Build Better Human Relations

Pointers FOR SUPERVISORS

Here's a Guide for Action When You Have To Fire Workers

▶ Discharging employees can be dynamite-laden. If you're not careful, you may discover you've touched off a booby trap. The payoff? Both you and your company suffer the consequences in the form of resentment and hostility from employees, both as individuals and as a group.

By AUREN URIS,
Editor, Research Institute of America

FIRING AN EMPLOYEE involves a real emotional wrench at both ends. The need to follow sound practices is all-important, and you can save yourself and your company headaches by proceeding along definite lines to accomplish certain specific ends. The fact is, the process of firing has come of age.

You may have one of a variety of reasons for letting an employee go. It may be to enforce discipline, remove a source of friction, or eliminate substandard work. Sometimes, of course, the company's situation may require a reduction in personnel.

Whatever the reason, you must handle the discharge in such a way as to minimize the impact on the employee you're dismissing and to retain or improve the morale of the others in your group. You can also make a hard job less painful for yourself if you follow a few rules.

Here is a step-by-step procedure that can guide your actions before, during, and after the firing interview:

1. Give Fair Warning

Hints are not enough. You must make it clear to the employee what the prospects are: "If the situation doesn't improve, we may have to replace you."

Certainly, it's a shocker. Yet the warning must be specific and beyond any possibility of misunderstanding.

This approach, tough though it seems, accomplishes two purposes. You make it possible for the employee to alter or improve the failings which are causing you concern; and you eliminate once and for all getting yourself into a situation where he may justly say "It was up to you to let me know how bad the situation was."

2. Prepare Yourself

You, yourself, are at least 50 percent of the problem. Accordingly, you must adjust your mental machinery to be able to handle the firing interview properly.

Don't underestimate the importance of your feelings in such a situation.

You may have a personal liking for a person that you have to fire for one reason or another. In such a case, be sure that you don't start out with a defensive attitude or attempt to cover up your feelings by being gruff.

On the other hand, if the person you're firing is one you didn't get along with, you may feel the urge to make the interview the final (and for you, victorious) action in your feud. Such an approach is a direct threat to both your own and the company's employee relations. Reaction to a supervisor who makes dismissal an opportunity to indulge in his personal spite is bound to be bad.

The strongest note of the interview should be one of finality. You make that point best by being calm and matter-of-fact.

3. Lock the Door

This is one interview you want to be private. A slipshod, curt chat squeezed in between interruptions or in the hearing of any passer-by naturally makes the employee feel resentful.

The business at hand is important to the employee; so select a time and place when you can talk without interruption.

4. Stick to the Facts

You may want to review briefly the employee's faults and the steps you have taken to help him eliminate them. Don't be content to make general statements. Cite concrete, specific examples. The extent to which you'll review the record depends on the individual case.

5. Ease the Tension

It's a rare employee who is not under strain. It's up to you to help him release his tension. Your best move is to let him have his say. Many times the employee will question the justice of your decision. Here are some other possibilities.

a. The tearful appeal. To this response, your strongest argument is that any other decision would only postpone the inevitable action.

b. The angry denunciation. If this is the reaction you get, you may have to restate your case. But don't argue about it. If he can't be made to see the situation as you do, close this phase of the interview by indirectly indicating your decision is irrevocable: "You may not agree with me now, John, and I can understand your feelings. But when you've settled in another job, you'll probably see it my way."

c. Request for a "higher court." He may want to go to your boss to tell his side of the story. If that's the case, it's usually wise for you to agree. If you try to talk him out of it, it's only likely to heighten the desirability of the move in his eyes. The more readily you agree, the less likely he is to go through with it.

Of course, it goes without saying that your original decision must be sound enough to stand up under the examination of your superiors.

6. Help Him Along

Keep in mind the most painful aspect of his position. Essentially, you have just told him that he has failed. Of course, you can point out that it's a failure largely dictated by circumstances rather than his personal limitations. Nobody is suited for every type of job. Nobody can fit into every type of situation that develops around a given job. You can diminish his feelings that the ground has been cut out from under him. Do it by pointing out other directions in which he can turn.

You don't want to give him an over-

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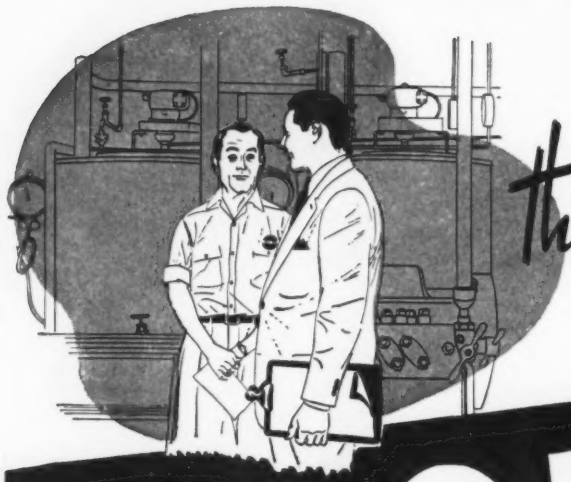

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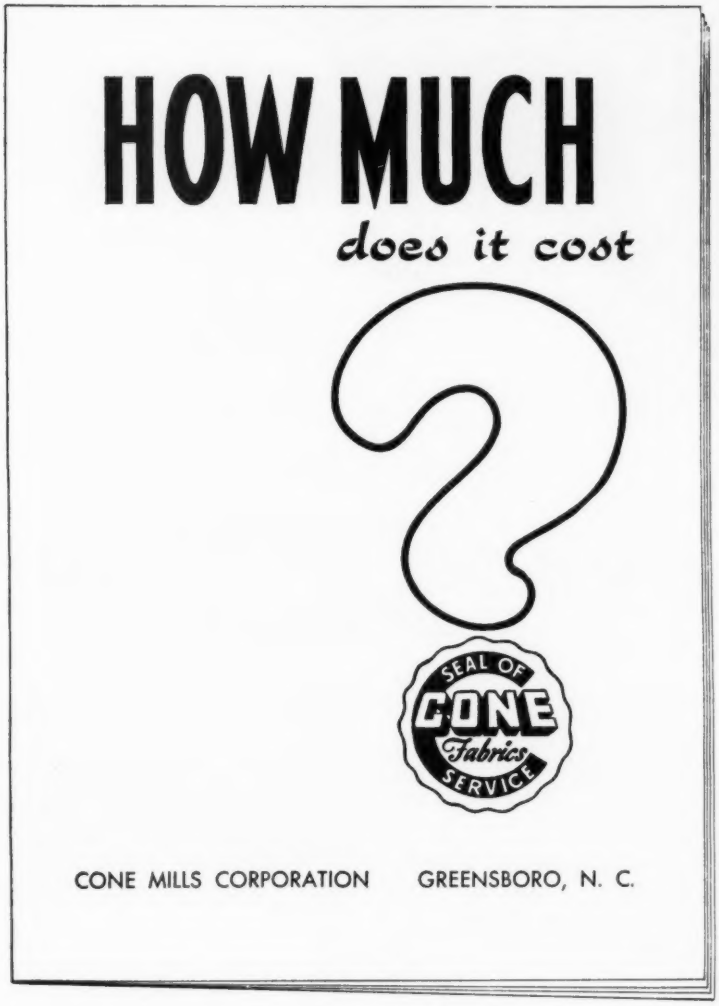

Exploring the Textile Community

This mill tells its employees what textile machines cost in terms of familiar items like food, clothing, and automobiles.

By MILDRED BARNWELL ANDREWS

A RECENTLY PUBLISHED BOOKLET titled "How Much Does It Cost?" is Cone Mills Corporation's way of pointing up the relationship of a textile mill's capital equipment to the company's employees and the community in which they live.

The simple, straightforward financial facts of textile life are presented in an intriguing contest, questionnaire style. The frontispiece carries a message to employees of the company from Herman Cone, who has always had the knack of getting right down to the grass roots of human relations and community relations.

"Many of our employees have become so accustomed to their daily work with the machinery they operate that I'm afraid very few of them realize how much money it will take to replace these machines when they wear out," Mr. Cone's message says. "In order to let you have some idea of the huge amount of money that this company will have to spend to keep its plants modern and efficient, we hope to bring some of these costs home to you clearly and simply by comparing them with prices of other things with which you are familiar."

What Capital Investment Means

Following are six double-page spreads, laid out in the form of a score-card game and illustrated with photographs that tell the dramatic story of dollars involved in capital investment in machines that are the lifeblood of textile communities.

The booklet, says Mr. Cone, was originally planned as a distribution piece for the group of about 600 Cone Mills employees who have worked for the company 25 years or longer. Photographs of mill machinery and the operating personnel were taken in Cone Mills and of their employees. The booklet, a neat and attractive slick-paper job, was printed locally.

But with all its home-grown background, it has created interest throughout textile circles and even among other industries.

Few people, even those who are agile with comparative figures, have really weighed the enormous capital outlay a textile mill must make in order to provide jobs and payrolls. Few realize that once such an investment is made, a similar one must be planned because machines wear out or become obsolescent. As soon as a machine produces less efficiently than another on the same production, it must be replaced or the mill's competitive position is jeopardized.

How Many TV Sets Equal a Drawing Frame?

The person who skillfully handles a textile machine and gets the best possible production from it understands more clearly its replacement value when it is compared to something his pay check is spent for.

"How Much Does It Cost?" tells just that.

"One drawing frame costs as much as 11 new TV sets in the $275 class."

"If you saved a dollar a day, it would take 3¾ years to buy the type loom on which Cone denim is made—and 55,890 years of dollar-a-day savings to replace all the 17,000 looms owned by Cone Mills."

A picker, the booklet says, does not cost as much as a $10,000 home. You could buy it and still have a couple of thousand left for furniture.

Thirty families, each spending the national average of $244.39 for cloth-

CONTINUED ON PAGE 294

What's beyond the WELCOME mat?

Today—every chemical producer will welcome your business. But in these days of *keen competition* and *plentiful supply*, the experienced chemical buyer looks beyond the welcome mat and the "glad hand." He goes further than a mere check of prices and specifications. In selecting a supplier he looks for the assurances and "extras" that mark the leading producer.

These Added Extras are the main reason why so many chemical buyers have for over seventy years made their first call—SOLVAY!

The World's Largest and Most Modern Alkali Production Facilities—combined with the experience of more than two generations of highly-skilled production men—are the buyers' assurance of *dependable* SOLVAY *quality*.

A Technical Service that is Different! Available to all SOLVAY customers are the facilities of SOLVAY's *Industry-Wise* Technical Service. With separate sections for different industries, SOLVAY can offer unusual technical services not ordinarily available.

Five Manufacturing Plants that are strategically located, in addition to a nationwide chain of over 200 local distribution centers, assure SOLVAY customers quick, efficient deliveries—whether they order a bag or in multiple carloads.

Buyers' Needs and Problems are handled by SOLVAY's trained and experienced *local* field representatives who operate out of SOLVAY's 13 branch offices.

For Top Quality Plus Other Extra Services that help you meet today's competitive conditions—be sure to *specify* SOLVAY!

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Soda Ash • Snowflake® Crystals • Potassium Carbonate • Calcium Chloride
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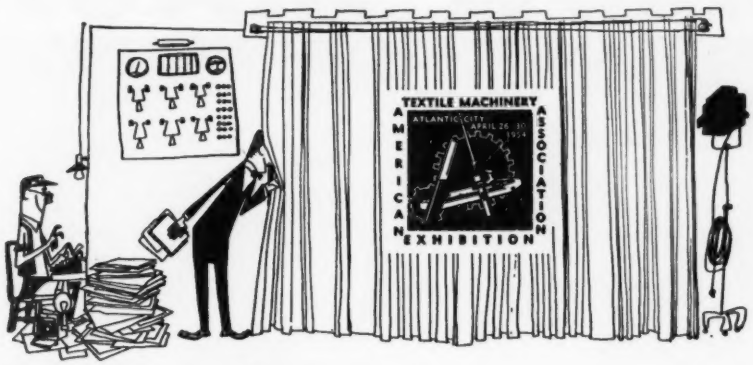
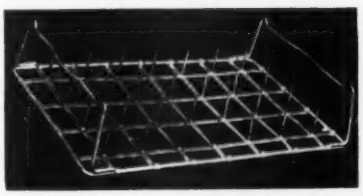


TW has been peeking . . .

behind the curtain of the American Textile Machinery Exhibition

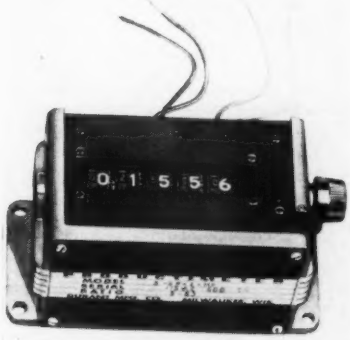
Here's what we saw that you might be looking forward to:

Cleaning Methods



OAKITE-CLEANED aluminum equipment will be displayed at the Oakite Products, Inc., booth. The right half of this aluminum cone holder was soaked for 5 mins. in a solution of one part No. 8 solvent and four parts of kerosene.

Electric Counter



PREDETERMINED ELECTRIC COUNTER will be shown by Durant Mfg. Co. It counts electrically and closes a switch at the end of predetermined yardage, and it can be located anywhere desired.

Tester Unit

The feature of the Scott Testers, Inc., booth will be a tester equipped with the Accr-O-Meter weighing system. Working on electronic principles, it records tensile stress to 0.05% accuracy, and elongation can be magnified to show a ratio of 1 to 20.

New Testing Equipment

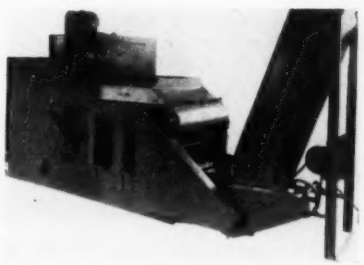
The Uster Corp. will unveil the new Schlumberger analyzer for wool and synthetics. The instrument automatically sorts fibers in graduated lengths to get the average length. Also on display will be the new Servo-Fibrograph and an automatic bobbin changer for use with the yarn-strength tester. Another feature will be the Spectrograph.

Universal Winding Equipment

Among the machines shown by Universal Winding Co. will be:

1. A new high speed vertical redrawing machine producing 2-lb. taper-top bobbins. This machine will also produce parallel-sided bobbins. It will be equipped with emulsion and cleaning attachments.
2. An 8-in.-traverse ring twister demonstrating the twisting of plied-nylon weaving yarn and flat Dacron, and a new 9-in.-traverse ring twister equipped for wet-twisting cotton yarn.
3. Two different take-up mechanisms demonstrating constant speed winding of precision packages of synthetic yarn furnished as from a continuous spinning machine or coating process.
4. A twister coner equipped with 2 for 1 spindles demonstrating the combined twisting and coning of a wider range of yarns and deniers than heretofore possible.

Applies Fugitive Tints



UNITINT MACHINE for the accurate application of fugitive dyes to raw stock will be shown by W. D. Dodenhoff Co., Inc. The inclined conveyor carries fibers to distributor or picker hopper.

New Diehl Drives

Equipment that has been developed during the past year by Diehl Mfg. Co. will be shown. This equipment includes:

1. New ¾-hp. power transmitter developed especially for loom conversions
2. New special-purpose loom motor with built-in flywheel
3. New vertical-twister motor
4. New 20-hp. air-cooled motor developed for the Saco-Lowell Gwaltney spinning frame
5. New power transmitter in ratings between 2 and 5 hp. and 1,800 rpm. developed especially for tricot knitting machines
6. New fractional- and integral-horsepower transmitter for general purpose use on machinery requiring rapid and controlled starting and stopping
7. New NEMA-frame-size, integral-horsepower, general-purpose motors.

MEON MAGIC

When you apply MEON to cotton at the wet twisting operation, using from 1% to 3% solution in water, you'll agree MEON really works magic.

Here's Why:

• INCREASED BREAK STRENGTH

Since a considerable increase in BREAK STRENGTH can be obtained with MEON TREATMENT, many mills have found it possible to start with a shorter staple cotton and still produce a product meeting the minimum BREAK requirement *which formerly required a more costly raw material.*

• SETS THE STRETCH

MEON treatment is also an aid in maintaining the degree of elongation imparted to the yarn in processing, and produces *greater uniformity.*

Learn how MEON will benefit you and write for full particulars today.

BORNE SCRYMSER Since 1874

Our Laboratory Facilities are always at your disposal

Other MEON Uses

- As an emulsion or size inhibitor and stabilizer when dissolved first in ½% to 1½% solutions with water before emulsifiable oils or size compounds are added.
- As a fibre lubricant and softener when 1½% solutions are applied in the amount of 1½% — 2% total volume, by weight, on cotton, rayon, wool, or other wastes before reworking.
- As a surface active agent when using 0.1% to 0.5% solutions in innumerable applications where rapid wetting and increased penetration is desired.
- MEON in solution is used in connection with the garnetting of hard thread waste (both cotton and synthetic). Application is generally after garnetting, and gives more drag to the short fibres produced and thus permits more efficient carding and spinning.

BORNE, SCRYMSER COMPANY ELIZABETH, N. J. • CHARLOTTE, N. C.

For more information, write direct or use Reader Service post card.

News

ABOUT THE SHOW

$10-Million Exhibit

About $10-million worth of machinery, equipment, and supplies will be on exhibit at the show. Exhibitors have taken 122 more spaces than in the 1950 show, and this year's exhibit will be about one-third larger than the one in 1950.

Top Service Men on Hand

Exhibitors of machinery and equipment will have their top service men available for consultation on mill problems. Hopes are that superintendents, overseers, engineers, and master mechanics will come to Atlantic City, not only to see what's new but also to discuss any problems they may have with present machinery and equipment.

No Cameras Without Permits

A new exhibition rule will be in effect this year. Taking pictures will be allowed only if you have a permit from the exhibition authorities. It is reported, however, that permits will be issued quickly and generously.

Hotel Rooms Available

There are 27,000 commercial hotel rooms in Atlantic City.

To reserve hotel accommodations, write—

The Housing Bureau
16 Central Pier
Atlantic City, N. J.

Homogenizing Equipment

A homogenizer with a new single-stage homogenizing valve will be in operation at the Manton Gaulin Mfg. Co., Inc., booth. Also on view will be a new automatic-recording pressure controller that provides a uniform homogenization.

Continuous Washer

Two bowls of the Riggs & Lombard Laxloop continuous washer will be in operation under load conditions. Each tub is driven by a 5-hp. gearmotor, and speed is adjustable up to 50 yds. per min.

Twister for Heavy Yarn

Whitin Machine Works will show its Cable-King uptwister for the first time. This heavy-duty machine has been used for some time to twist tire cord and other heavy yarns in packages from 8¼ to 9 lbs., with spindle speeds up to 5,250 rpm.

More Drive Equipment

A high-speed chain drive will be running over a mile a minute in the Morse Chain Co. booth. Also on display will be new torque limiters for drives, cam clutches for antirotation applications, and centrifugal clutches.

Single-Apron Dryer

One of the machines shown by C. G. Sargent's Sons Corp. will be a newly designed single-apron dryer for stock drying or for backwash drying sliver or tops. Capacity of the machine is 48 3-oz. ends at 15 ft. per min. or 700 lbs. of card sliver per hour.

Napping Machine

The new napping machine that will be shown by David Gessner Co. has four design features: torque control and self-correcting speed control for napper rolls, positive inspeed control, and infinitely variable tension control with tension indicator.

Barotor Model

A lab-size model of the Barotor will be on display by the Wiesner-Rapp Co., Inc., The design features a patented quick-opening door that doesn't have to be bolted and unbolted.

Process Controls

Minneapolis-Honeywell Regulator Co. will have on display a low-range pyrometer for measuring tentering temperature of synthetic-yarn fabrics. Also on display: a flow-meter receiver with a linear chart and electronic integrator; a remote-bulb thermometer that requires less than 1 sq. ft. of panel space; and a new series of automatic-proportioning control valves.

Motors and Drives

Westinghouse Electric Corp. will show its new gearmotor for cotton cards. The motor can be mounted on or supported by the card shaft, and fixed cylinder speeds are maintained. Also shown will be new loom motors with flexible bearing and medium inertia design, plus a completely enclosed transformer and a packaged multi-motor slasher drive. The new NEMA rerated motor will be on display.

Fiber-Length Tester

FIBER-LENGTH TESTER will measure about 500 individual fibers per hour. An optional counter (top) records the number of fibers of each length. The tester will be shown by Stellite American Corp.

Show News Briefs

▶ New bobbins and accessories will be shown by Cloverleaf Freeland Corp.

▶ The nonlapping continuous roll feed recently introduced by Mount Hope Machinery Co. [TW, Feb. '54, p. 137] will be on display.

▶ A new caster for textile-mill trucks will be shown by Wright-Batchelder Corp. Two- and-four-inch casters come with or without rubber tires.

▶ New gauges for the spinning room will be unveiled by National Ring Traveler Co.

▶ Micro Switch will show several hundred precision snap-action switches and mercury switches. One feature will be the new mercury-switch thread-break detector.

▶ New Departure will show new sealed bearings for textile applications.

▶ Newly developed all-aluminum section beams, loom beams, and tricot beams will be shown by Briggs Shaffner Co. They are built to withstand maximum yarn forces.

Detailed reports of some other new equipment that will be seen at the show appear on the pages of the Textile Equipment News section.

Complete Guide to Exhibitors containing the WHO, WHAT, and WHERE of each exhibit starts on page 137 of this issue.

How to produce more at less cost ...increase profits!

Alemite methods of transferring lubricant to bucket pumps proved 63% faster by actual on-the-job time study!

An important saving in transferring lubricant—but even more important than the man-hours saved are the *machine*-hours saved—the costly repairs that don't have to be made, the increased bearing life. And the reason for these savings is that only "refinery clean" lubricants reach bearings—machines operate at peak efficiency longer—unit costs go *down!*

Alemite transfer pumps fit directly into refinery drums, fill a portable bucket pump in *less than a minute* with no air pockets, no spillage, mess or waste. Then, the large capacity of the bucket pump allows servicing of hundreds of bearings without stopping for refilling.

There is an Alemite transfer pump and bucket pump combination just right for your plant, big or small. Transfer pumps are available for 100 and 400 pound drums, all types of lubricant. And you will find a bucket pump to service any machine—to handle lubricants from the lightest oils to heaviest, high pressure greases. Wide range of capacities, developing pressures as high as 15,000 psi. All of them are tightly sealed—preventing contamination, reducing fire hazards.

With Alemite Plan "B" Only Refinery Clean Lubricant Reaches Machines

A 400 pound barrel of lubricant arrives at the plant oil room—sealed, fresh, "refinery clean."

An Alemite transfer pump is inserted in the bung-hole. It is threaded to fit and seal standard refinery bungs.

In less than a minute a twenty-five pound capacity bucket pump is filled with lubricant—free of contamination—no air pockets—no mess!

Now the bucket pump is ready to service hundreds of bearings without refilling—supplying lubricant that has been protected all the way from barrel to bearing!

This combination of transfer pumps and bucket pumps is known as Alemite Plan "B." It is one of the five Alemite plans that your trained Alemite representative can show you. Ask him about the colorful, new, informative slide film, "No Margin for Error," which will help you and your men cut production costs. No obligation, of course.

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Free! **New Booklet "5 Plans for Better Plant Lubrication"**

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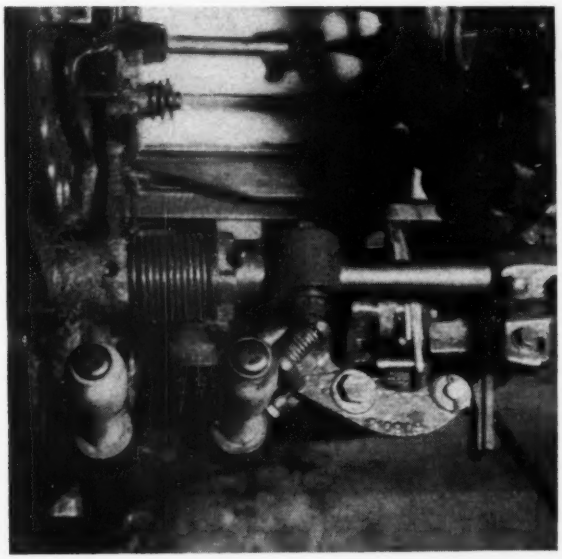
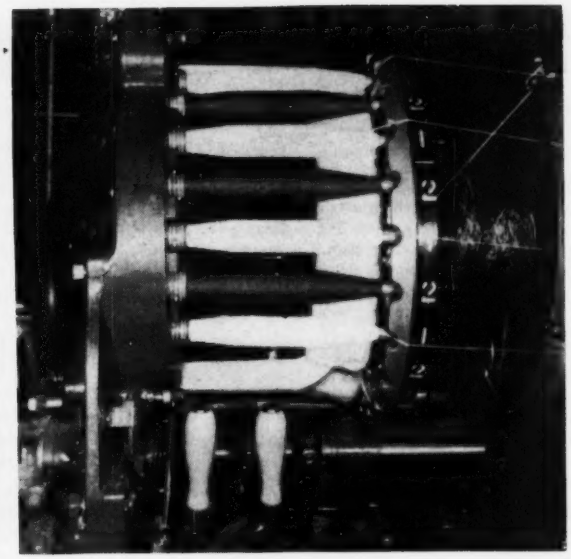
TEXTILE *Equipment* NEWS

C&K Introduces Seven Looms



THE SCISSORS-TYPE THREAD CUTTER and thread holder are located directly underneath the conventional-type single-color rotary magazine on the 82-in. multipurpose filling-mixing loom. The loom is easily converted from a 2x1 loom to a single-shuttle loom for more economical operation.



THE TWO-COLOR ROTARY MAGAZINE used on the 48-in. and the 72-in. multipurpose looms running two colors of filling is brand new. The bobbin disk is marked Nos. 1 and 2 to indicate to the person who is refilling the magazine exactly where to plug the new filling.

Seven new looms have been developed by Crompton & Knowles Loom Works, Worcester 1, Mass. Two looms are specialized and the other five are multipurpose looms with the same basic features. All seven looms will be running at Atlantic City.

The similar features begin with heavier and more rigidly constructed loomsides. The same frame construction is incorporated in all looms. For example, a multipurpose 60-in. loom for weaving filament-rayon fabric would have the same basic frame construction as that of a 78-in. loom weaving a staple-rayon fabric. The only difference is that the wider loom would have additional cross girders.

Crankshafts and camshafts (bottom shafts) are the same diameter on all looms. Single-piece camshafts are used on narrow looms with single driving gears. Two-piece camshafts are used on wide looms that have drive gears on both ends of the loom.

All five looms are equipped with a new composite-type, loom-driven let-off. A large worm gear housed in a fixed position is driven by other gears that, in turn, receive their movement from the lay.

A back roll arrangement accurately measures the warp tension and indicates to the let-off the amount of movement necessary to keep the warp tension constant.

Beam-head diameters are up to 28 ins., and beam-gudgeon diameters are all 1½ ins.

The double-plate faced clutch (same type as that used on S-6 looms) is used on all multipurpose looms.

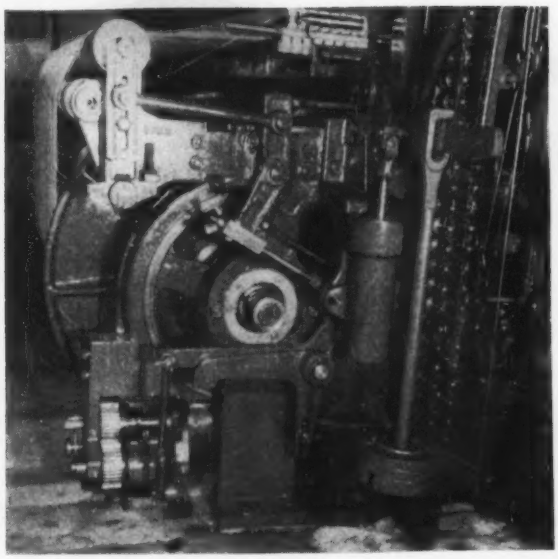
All five looms have rotary-type magazines even though they are running from one to four colors of filling. The rotary magazines equipped for more than one color of filling all have vacuum filling-end removal.

The new link-type binder is used on all five looms. When a shuttle is received in a shuttle box, the binder link causes the binder to gradually close in on the shuttle and help check it. But when the shuttle is picked out of the shuttle box, the binder link releases the pressure on the shuttle to let it be picked out of the shuttle box easily.

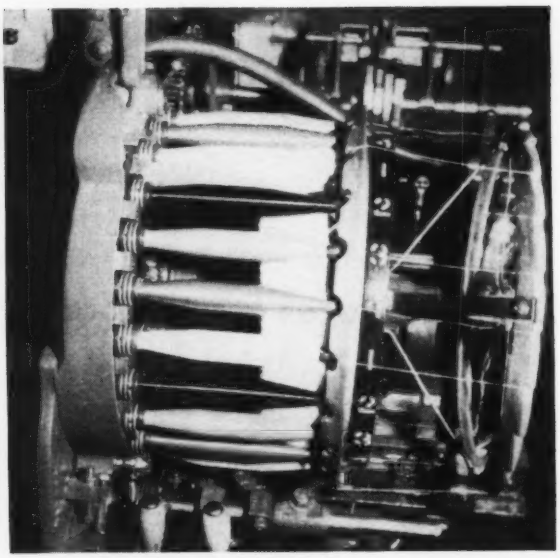
The cone-type picking motion is used on both ends of all five looms.

Any of the five looms can be equipped at Crompton & Knowles with any conventional take-up motion for weaving various fabrics. Any conventional harness or head motion can also be used.

The first loom in the multipurpose group is an 82-in. filling-mixing loom with a positive-geared 2x1-box mo-



THE COMPOSITE-TYPE LOOM-DRIVEN LET-OFF operates automatically on all the multipurpose looms. The back-roll arrangement measures the warp tension and indicates needed movement to the two small gears near the floor. A large worm gear in the housing at the end of the beam is driven to let off the warp.



THE FOUR-COLOR ROTARY MAGAZINE used on the 60-in. and 78-in. 4x1 looms has space for four colors of filling, each numbered one through four. Filling-end removal on two-end four-color magazines is vacuum controlled. A pump driven from the loom supplies the vacuum.

tion weaving a staple-rayon and acetate blended fabric.

The conventional-type single-color rotary magazine is equipped with a scissors-type thread cutter designed to cut and hold the filling. Two over-and-under electro-mechanical feelers are used on the drop-box end of the loom.

Shuttles are 17½ ins. long, and 8¾-in. wooden bobbins are used.

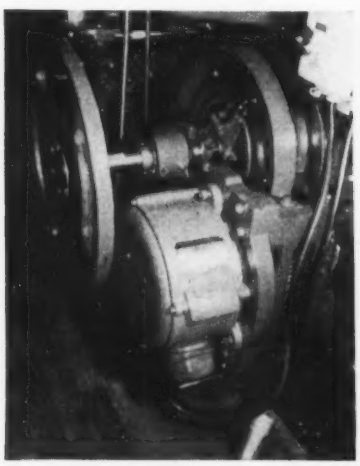
The ¼-in. space Knowles head motion on the loom has 20-harness capacity with built-up reinforced vibrators. This head also has a 60% time movement for easier harness action, and warp-end breaks are said to be reduced.

One outstanding feature of this loom is that it is designed so that it can be converted from a 2x1-loom to a single-shuttle loom. When this change is made, a loop picker and parallel shoe are used to replace the drop-box picker and rocker iron.

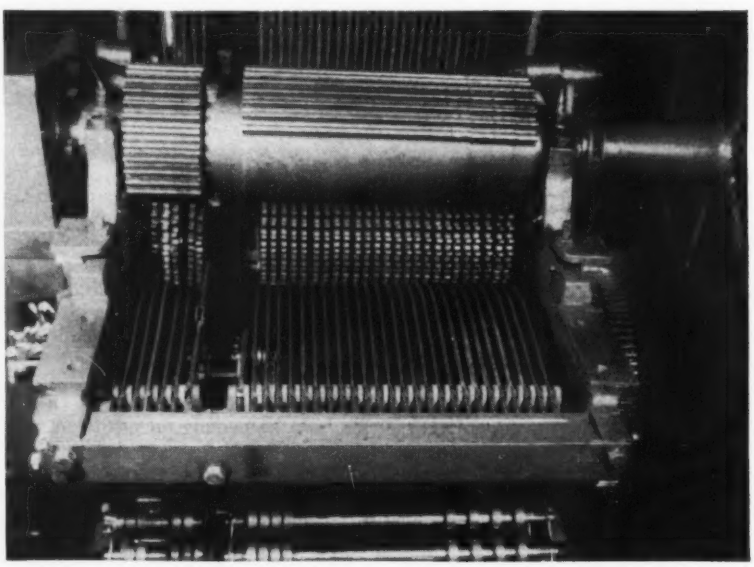
For further information about the above loom circle T-1 on Reader-Service Card

The second multipurpose loom is a 48-in. geared 2x1-box-motion loom and will run a two-color cotton sports-denim fabric.

CONTINUED ON PAGE 308



A DOUBLE - PLATE FACE - FRICTION CLUTCH is built into all multipurpose looms. With this clutch, over-all loom width is reduced because a pancake-type loom motor is used to cut down the length of the crankshaft between the clutch and the hand wheel.



SELECT-A-PIC OPERATION of the new W-3A loom is controlled from the box chain at the Knowles head motion.

TEXTILE *Equipment* NEWS

Six More New or Improved Machines Announced by Whitin

Whitin Machine Works, Whitinsville, Mass., has announced new roving and spinning frames for its American worsted system, in addition to the Roto-Drafter [TW, March, p. 137] previously announced.

Also new from Whitin are a wool spinning frame with 24 major improvements, a new cotton drawing frame, a large high-speed cotton roving frame, and an improved spinning frame for the cotton system. All the new machines will be shown at Atlantic City. (Whitin also announces it is the sole agent in the U.S. and Canada for the direct spinner manufactured by Société Constructions Mechaniques de Stains [TW, April '53, p. 124]. The direct spinner spins 20s to 105s yarn, cotton numbers, from continuous-filament tow.)

Here are brief descriptions of the new machines:

American-System Spinning Frame

A new arm for top-roll suspension and weighting has been applied to Whitin's Superflex spinning frame. (Top-roll system is shown in the picture of the roving frame.) The traverse on the new spinning frame is 11 ins., adjustable to 9 ins. Ring sizes are available from 1½ to 3½ ins.; gauges will normally be 4 to 4½ ins.

Circle T-8 on Reader-Service Card

Wool-System Spinning Frame

The Flex-Spin wool spinning frame has a variable-speed drive, with independent variable-speed controls for the front rolls and the twister heads, tachometers for reading front-roll and twister-head speeds, and a four-speed transmission for changing the twist. Ball-bearing twister heads can be easily removed and accurately positioned. An oil-free head end results from the elimination of head-end sprockets and other changes. Double-boss front rolls are spring weighted, and revolving clearers are used for a double line of rolls. Builder motion is in the head end. Gauge is 4 to 7½ ins.; traverse is 12 ins.

Circle T-9 on Reader-Service Card

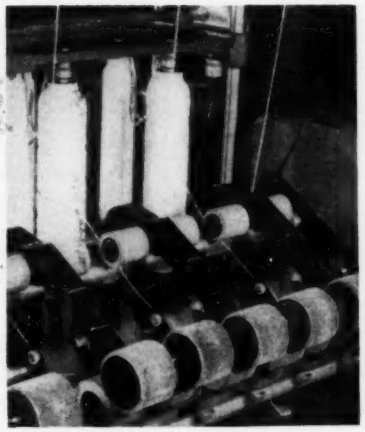
Cotton-System Equipment

1. A new four-over-five drawing frame, called the Even-Draft, is a new addition to Whitin equipment for processing cotton and rayon.

Circle T-10 on Reader-Service Card

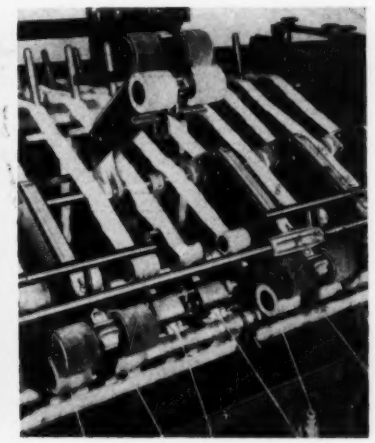
2. A 12x6½-in. roving frame, called the Hi-Pro, produces bobbins with up to 55 oz. of yarn per bobbin. Because of new flyers, the speed and production exceed previous standards.

Circle T-11 on Reader Service Card



Cotton-System Spinning Frame

SUPERFLEX SPINNING FRAME for cotton and short-staple synthetics features the Whitin Super-Draft two-apron drafting system. The top rolls are center suspended, and the weight control is simple to adjust; the top arm is shown here in normal running position. The standard arrangement using a ball-bearing front roll and various types of ball rolls are available. Traverse is 11 ins., adjustable to 9 ins. The frame has streamlined ends and spring-counterbalanced rail.



American-System Roving Frame

QUIK-SET ROVING FRAME features a new arm for top-roll suspension and weighting. The top arm is shown raised. Top rolls are center suspended, and the weight can be read directly on the index gauge. An instant ratch control can be operated while the frame is in motion. Worsted sliver is made up to 100 grains per yard, and synthetic sliver up to 120 grains per yard. Effective fiber lengths from 2½ to 8¾ ins. can be processed.

3. New Super-Flex spinning frame is shown in the picture.

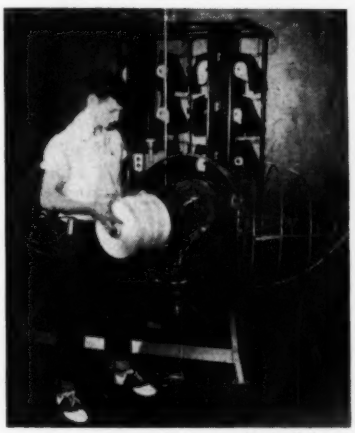
Circle T-12 on Reader-Service Card

High-Speed Winder

The Speed-Matic, a fully automatic high-speed winder, operates at 12,500 rpm. and features: (1) individual motor drive with built-in brake clutch control, (2) externally mounted picking-motion and bunch-builder assemblies, (3) a completely new variable traverse with straight yarn path, (4) wind ratios for any requirement, and (5) it produces a tailless bobbin. A new automatic bobbin loader, conveyor, and pin-boarding device are available.

Circle T-13 on Reader-Service Card

Deering, Milliken Trust Develops Two-for-One Twister

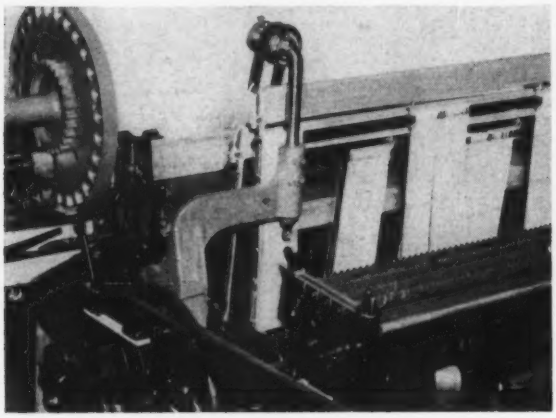


A 25-LB. PACKAGE is the feature of this new two-for-one twister developed by Deering, Milliken Research Trust, Pendleton, S. C. The twister will be shown at Atlantic City. The two-spindle unit has a separate motor for each spindle and a creel that takes 20 packages. Now being used for tire cord by Deering, Milliken, the twister also has applications in the tufted rug, chenille, and industrial-fabric branches of the industry. The 25-lb. knotless package is doffed and the machine reloaded in a minute. The unit remains rethreaded after doffing. A large cage guards the ballooning cord during twisting. Speed is 3,000 to 5,500 rpm., or 6,000 to 11,000 turns of twist per minute. One spindle can produce 2,300 lbs. per week (three shifts, six days) of a 5-ply, 11,000-total-denier cord at 2.5 tpi., 5,000 rpm., and 97% efficiency.

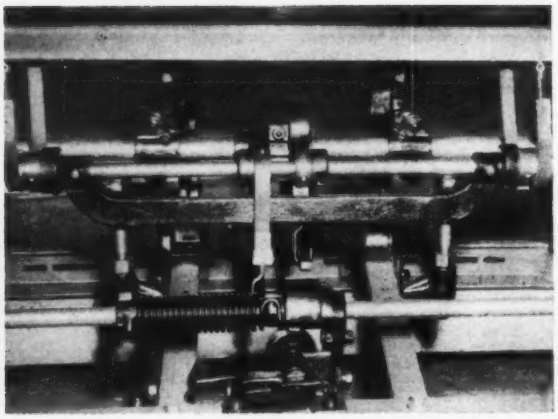
Circle T-14 on Reader-Service Card

TEXTILE *Equipment* NEWS

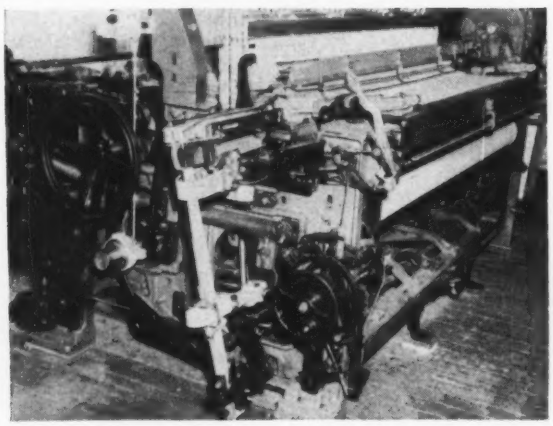
Draper Unveils Seven Looms



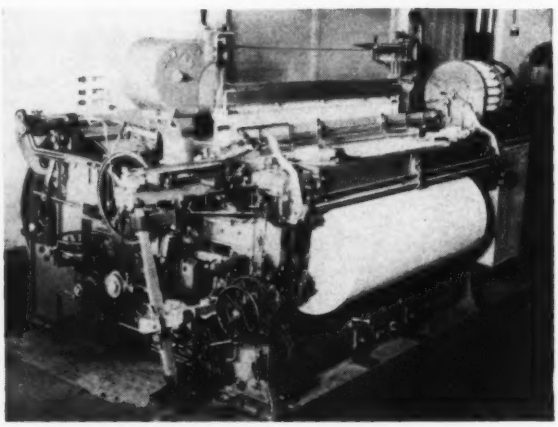
NO ARCHES are built on the new E-model loom. Harnesses are supported at each end by two small stands and rods.



THE HARNESS MOTION of the new E-model loom is underneath. As a result, cloth is kept cleaner, and visibility is improved.



A WIDE RANGE of picks per inch is possible on this XP loom with compound geared let-off and take-up.



ANOTHER ARCHLESS LOOM is this X-2 model that has clock-spring tops mounted to the loomsides.

Seven looms with major changes have been developed by Draper Corp., Hopedale, Mass. These looms will be running at Atlantic City.

The first loom is a 46-in. E-model archless loom weaving 64x56 cotton print cloth at 178 ppm. Since the battery is the highest part of this loom, weave-room visibility from loom to loom is greater.

The conventional arch of the loom has been eliminated by placing a roll-and-shaft harness motion underneath the loom just over the ends of the treadles. The tops of harnesses are supported by harness rolls and harness strapping connected to a rod in a small stand mounted on each loomside.

The rod that supports the harnesses can be moved up or down for any width harnesses and to adjust the harnesses.

The loom has a ¾-hp. Draper-Diehl power transmitter for positive brake and clutch action. The regular side shipper motion is used with the drive. The loom shown will be a left-hand model.

Other features are spring-type crank arms, a new protector-motion frog construction that uses spring-packed "live" frogs, a metallized take-up roll, picking shafts with finished journals, and 8-in. bobbins.

Crankshaft and camshaft boxes are pressure lubricated.

A No. 4 Roper let-off is used, and beam-flange diameter is 26 ins. The beam bearings have extensions for easily rolling the beams into the bearings and will also accommodate 28-in. heads in the same position.

For further information about the above loom circle T-15 on Reader-Service Card

The second loom is a 90-in. XL loom weaving 64x64 sheeting at 120 ppm.

The loom has two roll-and-shaft harness motions and two sets of underneath parts. Bobbins 8¾ ins. long are run. Draper drive No. 6 is used.

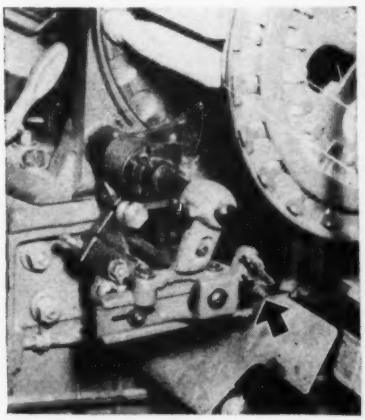
The two most important features of this loom are the No. 1 automatic compound let-off and a new adjustable drag-roll bracket assembly, both applied to reduce beat-back on heavy weaves.

For further information about the above loom circle T-16 on Reader-Service Card

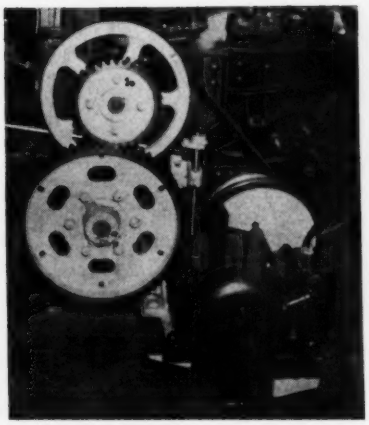
Loom No. 3 in the group is a 72-in. XP loom weaving mattress ticking at 152 ppm.

The loom is equipped with a Draper-Diehl power transmitter, new-type picking-shaft construction with floating thrust washers, and a one-shot lubrication system for greasing harness

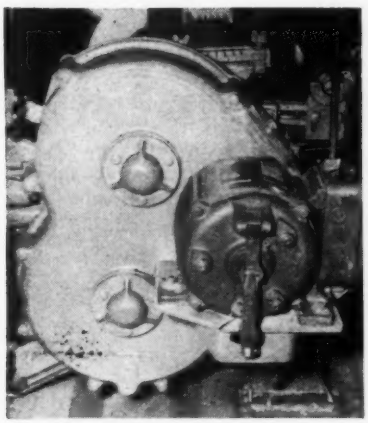
TEXTILE *Equipment* NEWS



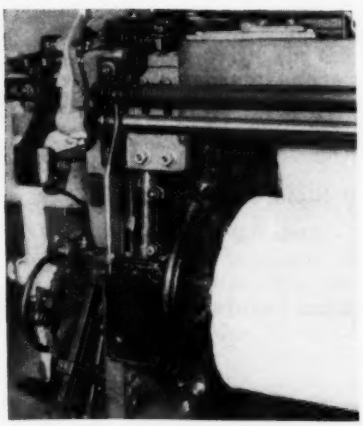
THIS THREAD CUTTER on the X-2 loom replaces the standard Stafford thread cutter. Fewer parts are used.



A V-BELT DRIVE with a two-piece camshaft drive gear on an X-2 loom eliminates cumbersome outside bearing parts.



THE OIL BATH totally encloses the driving gears on an X-2 loom. The drive is a 1-hp. Draper-Diehl.



ANTIFRICTION BEARINGS are provided on an X-2 loom. Another feature is driving take-up gears enclosed in an oil bath.

cams, auxiliary shaft bearings, idle-gear studs, and camshaft and crankshaft center boxes.

Shuttle length is 16½ ins. for 8¾-in. bobbins. A double set of underneath parts is used. A center-fork stop motion is on the loom, which features a reversing link construction.

The feature of this loom is that it can be adjusted to a wide range of picks per inch of cloth. A compound-driven No. 4 Bartlett automatic let-off and a compound-driven nutting high-roll ratchet take-up make the wide range of picks possible. Full-to-empty loom-beam running without adjustments is also made possible by these let-off and take-up motions.

For further information about the above loom circle T-17 on Reader-Service Card

The fourth loom is another loom without arches. It's a 46-in. X-2 loom weaving a 75x44 sports-denim fabric at 192 ppm.

A clock-spring top is mounted on short brackets attached to the loom-sides. This construction eliminates the regular arches. The clock-spring top is designed so that, with a single adjustment, tension on all springs can be changed.

New-type harness frames for arch-less-loom construction are included in the harness motion. The harnesses are lifted by their end braces rather than by the wooden frames.

The loom has a metallized take-up roll and No. 89 high-roll ratchet-type take-up. Take-up-roll bearings are equipped with antifriction bearings.

A new-type single V-belt drive is used on the loom. A two-piece camshaft drive gear is placed on the loom so that the V-belt can be changed without removing the gear hub and provides easy adjustment of pulley for speed changes.

A new-type pick cam and toe are on the loom. Instead of the cam and toe being separate, as in the past, the cam and toe are one piece; and all contact surfaces are contour milled. A removable yoke is included in the cam opposite the toe position to place the combination part on the camshaft. This feature saves loomfixer time in adjusting power settings and toe application.

Picking shafts and picking balls have antifriction bearings. Picking-shaft stops are adjustable and are made of neoprene molded to a threaded stud.

Drag rolls are arranged to give a level warp line with the 32-in. beam flanges on the loom. A lightweight (aluminum) protector rod is included to eliminate excessive weight so that the spring tension can be reduced to let the protector-rod dagger respond faster to give more positive protection at high loom speeds.

Bobbin disks have needle bearings that require lubrication once every two years. The filling-cam follower has a convex aligning washer. The loom runs a 16½-in. shuttle with a 8¾-in. bobbin.

A No. 5 Bartlett let-off with larger and wider friction bands is on the loom.

A new-type thread cutter is used that has fewer parts than the Stafford thread cutter. The results are fewer and easier adjustments by the loomfixer.

The temple also has a new-type thread cutter that cuts the filling ends closer to the cloth selvage. This temple is also double adjustable.

The warp stop motion is the electric type but is designed to be adjustable by the same methods used to adjust mechanical stop motions. The electrode bars over the lease rods of the stop motion can be moved up or down to adjust the distance between the two. This adjustment gives more space between the rods required for certain weaves on which wires tend to beat against the bottom of the electrodes.

For further information about the above loom circle T-18 on Reader-Service Card

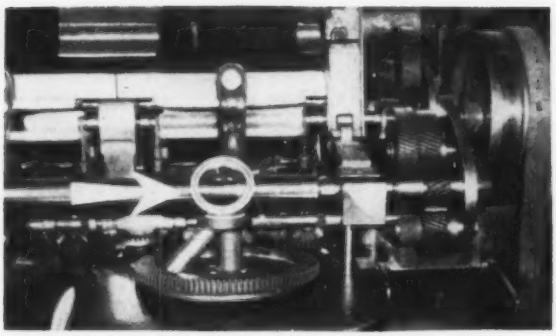
Another new 40-in. X-2 loom will run 48x48 sheeting at 220 ppm.

The loom features an enclosed oil bath for the gears of the 1-hp. Draper-Diehl transmitter and for the motor pinion, crankshaft drive gear, and camshaft drive gear.

For further information about the above loom circle T-19 on Reader-Service Card

CONTINUED ON PAGE 310

Ideal Industries Announces a Complete Drawing Frame



BALL-BEARING RACE (arrow) is pressed over the top of the coiler; and the assembly is suspended from a spider frame (not shown) mounted on the fibre spectacle.

A complete new drawing frame has been announced by Ideal Industries, Inc., Bessemer City, N. C. Equipped with the Ideal high-speed drafting system that has been supplied as a change-over roll system, the new drawing frame also features a new ball-bearing fibre tube-gear mechanism that eliminates static and avoids horseshoeing long fibers. It is recommended for use on cotton and all staple synthetic fibers.

The high-speed drafting system is recommended for front-roll delivery speeds of 180 ft. per min. and up and drafts up to 20. The system includes:

1. Top and bottom metallic rolls with 10½-in. square-top flutes hardened and ground to prevent nicks and lap-ups.

2. Ball-bearing spacer collars and housings that support the roll weights and provide stationary housings for the ball-bearing races in which the rolls turn. These spacers are gauged so that the flutes of the top rolls float rather than mesh tightly with the bottom-roll flutes.

3. Ball-bearing gear studs for smooth, fast running.

4. Fibre micrometer-gauged gears for precision, quiet running at high speeds, and elimination of static that might build up in the rolls.

The coiler tube gear, made completely of fibre machined to the same precision as steel, is suspended from the top rather than resting on the frame spectacle. Support is from a three-legged spider frame mounted on the spectacle and extending upward to the top of the coiler just below the calender rolls. The housing of a ball-bearing race pressed over the top of the coiler is fastened to the spider frame and supports the coiler with a small clearance of the spectacle race in which the coiler normally runs.

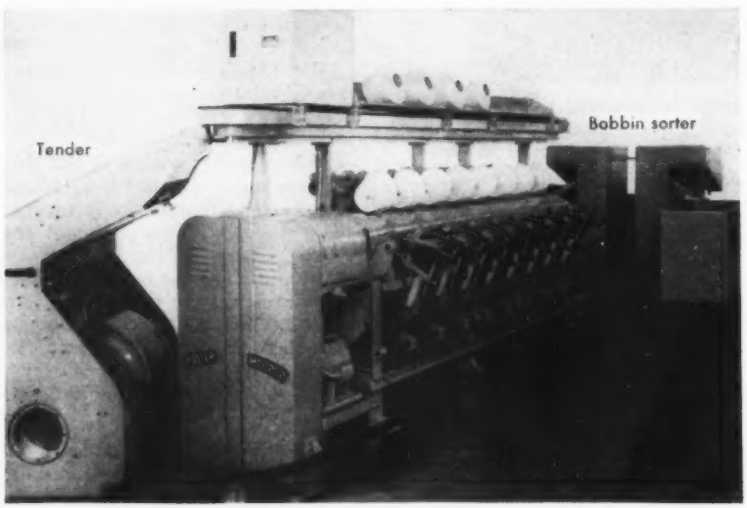
The purpose of using fibre is to eliminate static. Static will not build up in fibre, and therefore charged fibres will not cling to the coiler tube.

Other static-elimination features are the use of fibre plates for the spectacle and back apron of the frame and knock-off spoons of special-analysis stainless steel that will not conduct electricity.

On the basis of experience with the change-over drafting system, the new drawing frame will increase production 20% or more, improve yarn breaking strength, and in many cases deliver either one- or two-process drawing sliver with less unevenness than the card sliver showed.

Circle T-22 on Reader-Service Card

Cone Winder Features Automatic Tender and Bobbin Sorter



AUTOMATIC CONE WINDER features a tender that sucks up ends and ties a standard weaver's knot. The automatic bobbin sorter separates empty and partially filled bobbins. An operator can handle 16 to 18 bobbins per minute.

A new automatic cone winder, Model 202, developed by Foster Machine Co., Westfield, Mass., is said to produce standard 6x8½-in. knitting cones. It also winds all types of spun-yarn cones for warping, quilling, doubling, and twisting supply packages. Production of the automatic winder is 100 to 300% greater than the Foster 102 nonautomatic winder; an operator can handle 16 to 18 bobbins per minute during an 8-hr. shift.

The automatic feature of the machine is the motor-driven tender that makes a trip around the machine in 5 to 8 mins. It sucks up ends down and ties them with a standard weaver's knot, but it passes by ends that are running. A blower on the tender keeps critical parts such as the slub-catcher tension device free of lint.

Empty and partially filled bobbins are automatically doffed onto a conveyor, which carries them to a bobbin sorter at the end of the machine. This sorter automatically deposits empty bobbins in one bin and partially filled bobbins in another bin.

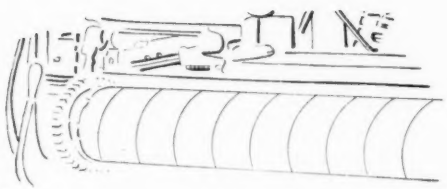
The operator is left the job of dropping full bobbins in a chute and catching the end in a clip (done in one motion), doffing cones, and threading up new cones.

A 7-hp. motor drives a 100-spindle machine. The winder will be on display at Atlantic City.

Circle T-23 on Reader-Service Card

TEXTILE *Equipment* NEWS

Smooth roll cover delivers high take-up tension



ARMSTRONG OFFERS A FULL LINE OF TAKE-UP ROLL COVERINGS

Armstrong can supply a cover to fit your needs in synthetic rubber, cork-and-rubber, plain or gridded cork.

Available For Export

This cover won't leave a mark on even the sheerest marquisette. More important, though Armstrong's NO-732 Accotex® Cover is smooth, it won't slip. It maintains firm, even take-up tension.

A special synthetic rubber compound had to be developed to give the NO-732 cover its extraordinary holding power. And this special rubber makes a cover that's as long wearing as it is efficient. A sturdy cloth backing makes it easy to handle.

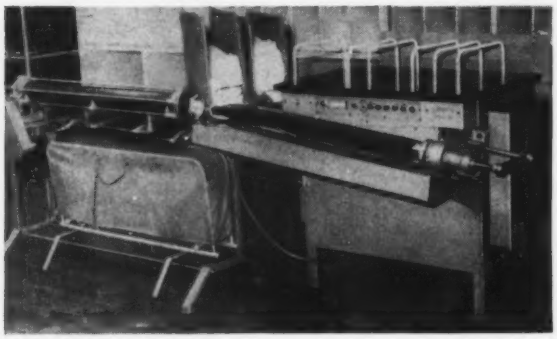
Your Armstrong man will be glad to arrange for a test of NO-732 on your looms. Why not call him today? Armstrong Cork Company, Textile Products Dept., 6704 Dauphin St., Lancaster, Pennsylvania.

ARMSTRONG'S TAKE-UP ROLL COVERS

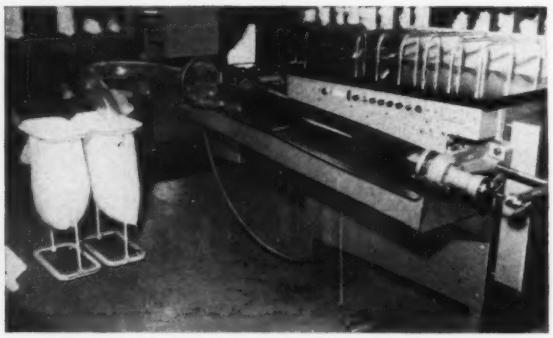
Product of the Armstrong Cork Company, Textile Products Department, Lancaster, Pa.

TEXTILE *Equipment* NEWS

New Machine Inspects 200 Doz. Stockings per Shift



CONTROLS on the front of the inspecting machine are operated by the inspector if the stocking is faulty. This stocking is not counted and not put in the tray. This setup is for conventional finishing.



FINGERS at the top portion of the form are electrically operated and grip the stocking while the stockings are turned. Perfect stockings are blown into the bag for Dunn-system finishing.

An automatic inspecting machine that can be used in hosiery mills using the Dunn system or conventional finishing methods has been developed by Southern Textile Machinery Co., Paducah, Ky. The new machine reduces inspectors' manual work, which results in more production and less operator fatigue.

When seamers lay stocking welts level on the trays, the inspector can boost her production to more than 200 doz. per 8-hr. shift. The production is the same for Dunn-system and conventional finishing methods.

The machine operations can be learned in a short time. The inspector takes the stocking from the tray on the elevator by the left hand and pulls the stocking on the form. The right hand then takes the welt and the left hand takes the toe. The left foot presses a switch to expand the form.

The expanded stocking is inspected and the form turned with the left hand. The form is collapsed with the right-foot switch and the stocking blown from the form into a bag or placed in a tray. The stocking is automatically counted.

If the stocking is faulty, a button on the control board is pushed. The stocking is stripped from the form but not counted. The operator takes the stocking from the tube mouth and places it on one of eight compartments on the bench top.

If the stockings are to be tied in dozens, the plastic tray that the hose fall into can be swung to allow the operator to tie the dozen lots.

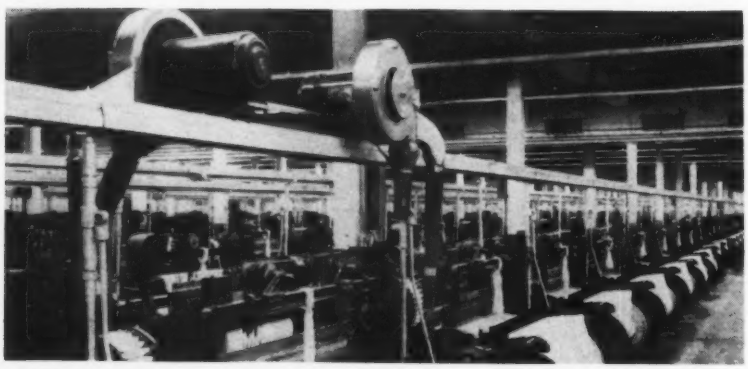
The expansion form is electrically operated and applies uniform pressure to all stockings. An electrically operated finger timed with the stripping attachment holds the toe portion between the clamping fingers. This device turns the stockings as the stockings are blown into the chute.

A switch can be thrown to prevent the turning of a stocking if the stocking is faulty. The turning device actuated by this switch consists of two drums, one that controls the perfect stockings and one that controls the imperfects.

A ¼-hp. motor operates the machine, and a ⅛-hp. motor operates the elevator. The machine uses 7 cu. ft. of air per minute at 40-lb. pressure.

Circle T-24 on Reader-Service Card

Traveling Cleaner Keeps Looms Free of Lint



LOOM CLEANER covers each loom at up to 10-min. intervals; the cleaner travels at 60 ft. per min. With the cleaner, hand cleaning during warp-outs is said to be eliminated.

Parks-Cramer's (Parks-Cramer Co., Fitchburg, Mass.) loom cleaner Type CTL, travels at 60 ft. per min. on a single-track system. Oscillating and stationary air outlets reach to within a few inches of the surfaces. Loom coverage is up to 10 mins., depending on the situation, and the air current can be automatically reduced over critical areas. The cleaner is said to be effective in weave rooms weaving cotton or synthetic fibers, coarse or fine numbers.

Connected right- and left-hand blower units operate from paddle-type fans. Two fixed, but adjustable, outlets blow off the drop wires, front harness, filling stop motion, and lay. Other oscillating outlets, whose arcs are controlled by a crank on the track wheels, cover all surfaces in general.

The traveling blowers are said to prevent accumulations of lint on the loom arch, harnesses, drop wires, stop motions, transfer motions, harness motions, lay, shuttle boxes, beam, warp, and fabric. Surfaces are kept sufficiently clean to eliminate hand cleaning during warp-outs.

The cleaner will be on display at Atlantic City.

Circle T-25 on Reader-Service Card

TEXTILE *Equipment* NEWS

Solve your synthetic fiber scouring problems with these new formulas!

Dacron*

Scour Dacron with 0.25% ENERGETIC-S and 0.25% ammonia, basis weight of solution, for 15 minutes at 160°F.

*"Dacron" and "Orlon" are registered trademarks of the E. I. du Pont de Nemours Co. (Inc.)

Orlon*

Wet out by padding in a cold solution (0.4% ENERGETIC-S, 2.0% Varsol**, 97.6% water). Allow to stand and then boil-off in soap and soda ash. Treat the fabric with 0.25% sodium chlorite, 0.25% oxalic acid, and 0.25% ENERGETIC-S based on the weight of the solution for about 1 hour at 200°F.

**"Varsol" is a registered trademark of the Esso Standard Oil Company.

Armour's new detergent— ENERGETIC-S—is specially designed for use on new fibers!

There's a new, efficient way to prepare acrylic and polyester fibers for printing and dyeing! It's ENERGETIC-S, Armour's new liquid nonionic detergent designed to be used in the presence of petroleum and aromatic solvents such as Varsol and xylene. Above are two new formulas that are proving highly successful in boiling-off synthetics.

ENERGETIC-S is an ethylene oxide condensation product, 94% active, and essentially neutral and salt free. It is soluble or dispersible in water, alcohol, ketones, petroleum fractions, and aromatic compounds. The detergency of ENERGETIC-S appears to increase about 10% when used with petroleum solvents to remove waxes, greases, and sizing from greige goods during wet finishing operations.

ENERGETIC-S has proven especially economical in desizing cotton, boiling-off synthetics, hosiery finishing, and machinery cleaning. It has proven far superior to other detergents in doing the job it was designed for—solving your detergent problems with the modern textiles of today while saving you cloth, time and money!

Mail this coupon today!

Armour Industrial Soap Department
1355 West 31st Street, Chicago 9, Illinois

Please send me:

☐ A free sample of ENERGETIC-S
☐ Free booklet—"ENERGETIC and ENERGETIC-S"

Name _____ *Title* _____

Firm _____

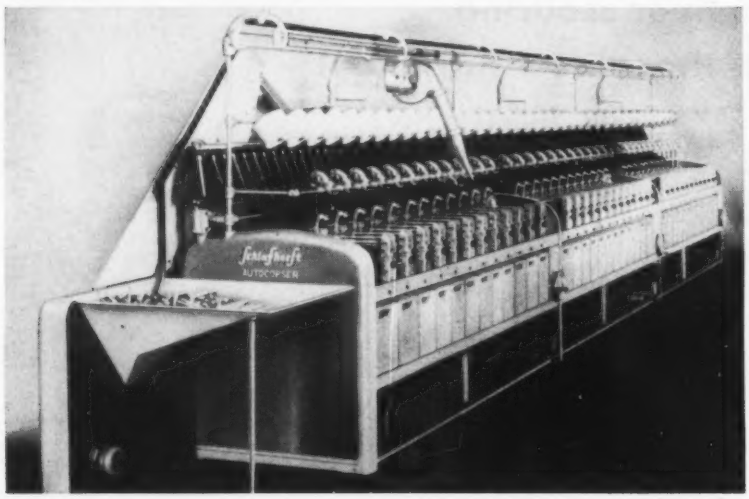
Address _____

City _____ *Zone* _____ *State* _____

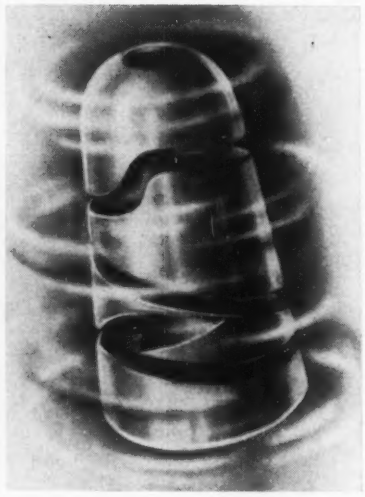
ARMOUR *Industrial Soap Department*

Armour and Company, 1355 W. 31st St., Chicago 9, Ill.

Automatic Quiller Will Wind at Over 12,000 Rpm.



AUTOMATIC QUILLERS can wind at above 12,000 rpm. These three 12-head machines are supplied with empty quills from one optional automatic hopper feed. The traveling cleaner is another optional feature.



YARN-GUIDE TRAVERSE is the feature of the Schlafthorst quiller. It is said to make a firm, nonparallel wind.

The Autocopser ASE, an automatic quiller made by W. Schlafhorst & Co., M. Gladbach, Germany, features a grooved yarn-guide traverse that provides a firm, nonparallel, conical wind. The traverse drum runs in a one-sided bearing.

A positively driven threaded spindle with a feeler device controls the advance of the yarn guide. No adjustments are necessary when the kind of yarn or yarn number is changed. The winding heads can be set for bunching.

Each head has separately controlled change mechanisms, stop motions, and adjustments for diameter, length of outer-diameter apex, and over-all length of the wound quills.

Speeds above 12,000 rpm. are possible. The speed is adjusted by a handwheel that controls the diameter of an expandable V-belt pulley, and the same mechanism shifts the V-belt and motor. A tachometer shows the speed.

Large packages will fit on the creel, and the machine can be equipped with a magazine cone creel.

Quills can be fed from a magazine or from an automatic hopper feed. The hopper will hold about 1,000 quills. As many as three 12-head machines can be fed from one hopper.

The machine can be equipped with a traveling cleaner that blows dust and lint from the yarn tensioner and the finished-quill boxes. Quills are stacked in boxes ready to be carried to the loom.

Circle T-26 on Reader-Service Card

NEPOTOMETER gives a carding action to a sample to predict nep-forming tendencies of the cotton. The web that is produced is compared to photographic standards.

Nepotometer Predicts Nepping Tendency of Cotton

A new instrument for predicting the tendency of raw cotton to form neps is being manufactured by Wright Machinery Co., Durham, N. C. It was developed by the Department of Textile Research at N. C. State College for the U. S. Dept. of Agriculture.

Called the Nepotometer, the new instrument will predict the comparative neppiness of cottons in processing and classify cottons into a standard class according to the tendeny to nep. The Nepotometer will permit selection of cottons best suited for the particular type of goods to be produced.

The machine has three cylinders with finely meshed wires that simulate a strenuous carding action. A 25-grain sample is fed to the machine. Neps are formed in proportion to the nep-forming tendencies of the particular type of cotton.

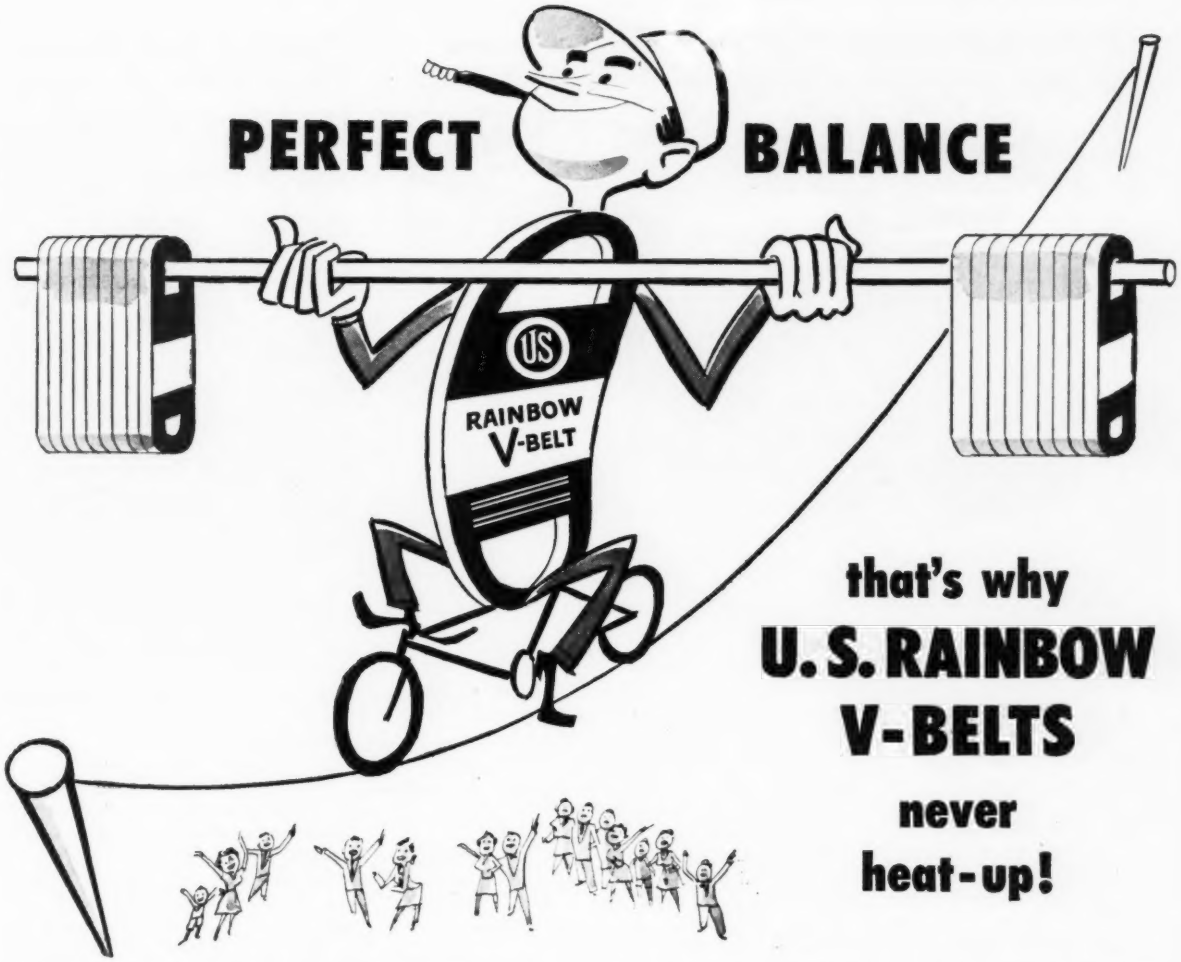
At the end of the test, a web is stripped from the top cylinder and compared with photographic standards to classify the sample. The time for a test is 4 mins.

The instrument is self-stripping. It is 16 ins. long, 13 ins. wide, and 16 ins. high.

Circle T-27 on Reader-Service Card

TEXTILE *Equipment* NEWS

PERFECT BALANCE



that's why U. S. RAINBOW V-BELTS never heat-up!

The top rubber cushion in a U. S. Rainbow® V-Belt is in engineering *balance* with the lower cushion. This keeps the belt cool under constant stretch and return. That's one reason why U. S. Rainbow can work so steadily on the toughest drives.

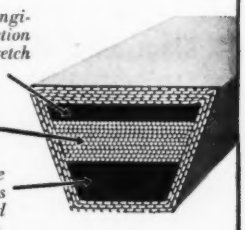
In every U. S. Rainbow the inherent stretch has been worked out beforehand in the factory, yet enough elasticity is retained to enable the V-belt to take the heaviest shock loads. The unique Equa-Tensil Cord Section—exclusive with "U. S."—insures sufficient *pull* and strength under a wide range of operating conditions. Straight sidewalls grip the grooves the full height of the belt, providing the complete contact which increases pulling power and eliminates slippage.

Order from your distributor, or get in touch with any of United States Rubber Company's 26 District Sales Offices, or write to address below.

Top rubber cushion *in closely engineered balance with the lower section . . . to keep cool under constant stretch and return.*

Equa-Tensil Cord Section— *all cords scientifically placed, each pulling its share of the load.*

A sturdy level cushion *for the Equa-Tensil Cord Section provides structural firmness for V-grooves and over the flat pulley of V-to-flat drives.*



A COMPLETE DRIVE SERVICE

MULTIPLE V-BELTS • F. H. P. V-BELTS • SHEAVES
FLAT BELTS AND BELTING • SPECIAL PURPOSE BELTS

"U. S. Research perfects it.
"U. S." Production builds it.
U. S. Industry depends on it.

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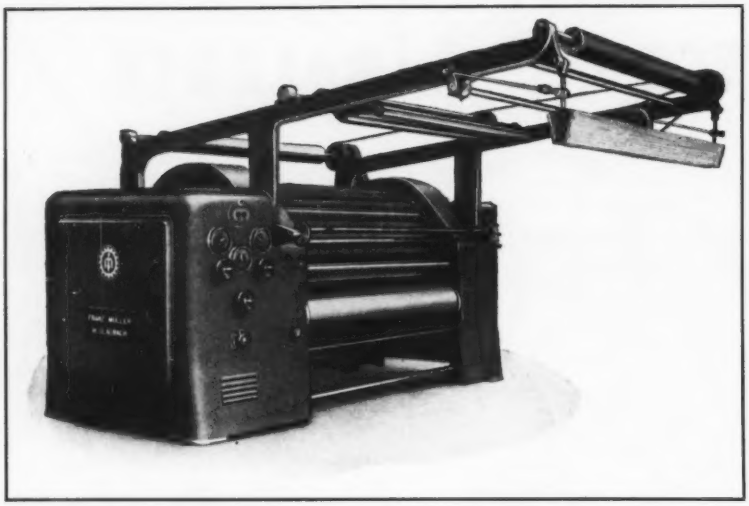
MECHANICAL GOODS DIVISION · ROCKEFELLER CENTER, NEW YORK 20, N. Y.

Hose • Belting • Expansion Joints • Rubber-to-metal Products • Oil Field Specialties • Plastic Pipe and Fittings • Grinding Wheels • Packings • Tapes Molded and Extruded Rubber and Plastic Products • Protective Linings and Coatings • Conductive Rubber • Adhesives • Roll Coverings • Mats and Matting

TEXTILE MACHINES S. P. A.

New Napper Features High Speed and Pile Control



HIGH-SPEED NAPPING MACHINE for pile and counterpile napping is said to operate at up to 40 yds. per min. on some fabrics.

The napping machine made by Franz Muller Mashinenfabric, M. Gladbach, Germany, is available from Textile Machinery Import Co. (Mawaco Machine Co.), 277 North Ave., New Rochelle, N. Y. A 36-roll machine operates at up to 40 yds. per min. Twenty-four- and 30-roll machines are also available. Raising energy for pile and counterpile and cloth speed are regulated by stepless controls and are indicated on big dials on the control panel, which is conveniently located on the front side of the gear case.

Cloth tension is controlled by a handwheel, and an electromagnetic brake stops the machine when the napper is cut off.

Other features of the napper: raising rolls are driven by circular-locked V-belts; gears are positively driven; number of revolutions is uniform; and rolls run in ball bearings. Converting the machine from pile and counterpile to semifelting takes only a few minutes without a change of belts or pulleys.

Excellent results are said to be obtained by mills using the TRI-Raising napper in the Continu-System. The new napper will be on display at Atlantic City in a building across the boardwalk from the main exhibition.

Circle T-28 on Reader-Service Card

Motorized Scray Delivers Ribbon Plaits

NEW SCRAY with motor-driven feed rolls folds cloth in a ribbon-candy plait that permits tangle-free feeding with a minimum of tension.

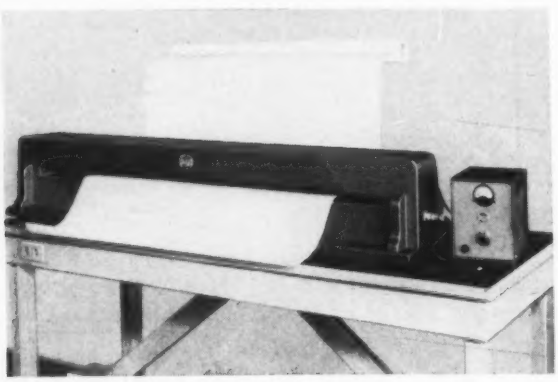
A new versatile scray has been developed by the Textile Div. of Tower Iron Works, Providence 1, R. I. The scray has motor-driven feed rolls and, according to the manufacturer, will provide a continuous, uniform-tensioned take-off for processing ranges that feed from rolls of cloth.

The motorized scray folds the goods in a ribbon-candy plait that permits tangle-free feeding with a minimum of tension. Regardless of how fast the range operates, ample time is allowed for splicing a new roll without interruption.

One man can load and change rolls. The scray can be readily moved from one range to another, and it handles fabrics in a wide variety of weights and widths.

Circle T-29 on Reader-Service Card

Electronic Metal Detector for Textile Inspection



METAL DETECTOR continuously inspects fabric for bits of metal. Speed is 25 to 1,000 ft. per min.

A new electronic metal detector designed to permit continuous inspection of textiles has been developed by Radio Corp. of America, Industrial Products Section, Front and Cooper St., Camden, N. J. It indicates the presence of magnetic, nonmagnetic, ferrous, and nonferrous metals, and it will inspect materials moving at speeds from 25 to 1,000 ft. per min.

RCA points out that it will detect knitting needles, card wire, joining rods, and other tramp metal that might damage textile machinery.

The detectors are built from standard components in any size. For most cloth-inspection applications, an opening of 1 in. is adequate; other heights can be furnished.

As the material passes through the aperture, tramp metal will distort a magnetic field and create a signal in the coil circuit. Controls can be set to stop a conveyor, light a warning light, sound a horn, spray mark the contaminated area, or perform any combination of these functions.

Circle T-30 on Reader-Service Card

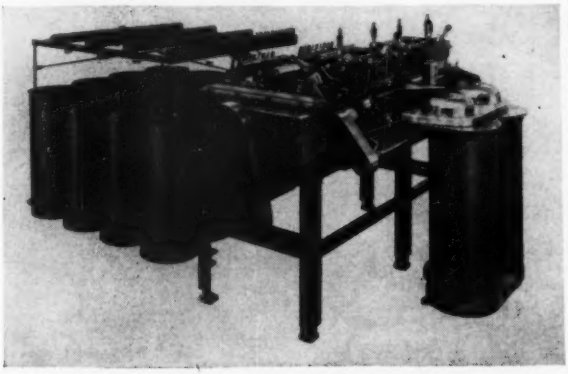
TEXTILE *Equipment* NEWS

TEXTILE MACHINES S. P. A.

Isotta Fraschini

CONTINENTAL COMBING AND SPINNING MACHINERY FOR

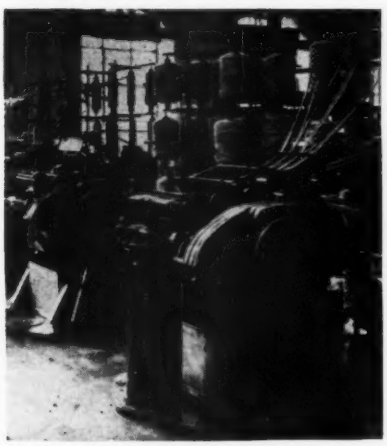
WOOL - BLENDS - SYNTHETICS



NEW STELLITE HIGHSPEED PIN DRAWER

for combing and drawing operation
speeds 55-70 yards/minute
faller width: 8¼"

Each head delivers a total sliver weight of 350-400 grs/yd. 6-8 doublings.



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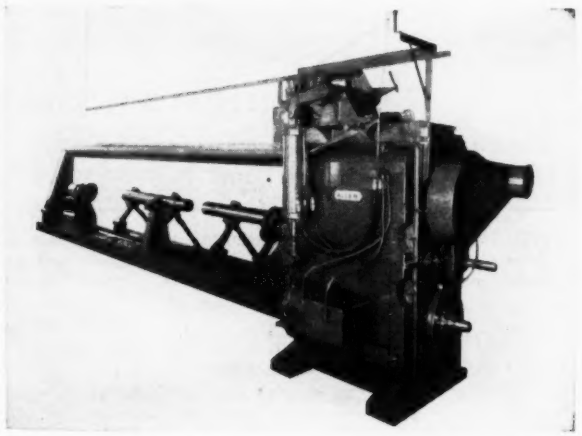
Allen at the Show

New Model H-3 Heavy Duty High Speed Beamer



The brand new H-3 Beamer is excellent for carpet and other heavy yarns. Accommodates 1, 2 or more beams. Features patented hydraulic compressor assuring warp uniform density and putting 33 1/3% more yarn on a beam. Many other features.

SHOWING New Allen G-3 High Speed Warper
with new patented hydraulic compressor unit assuring uniform warps and putting 33 1/3% more yarn on beam. Many other features.

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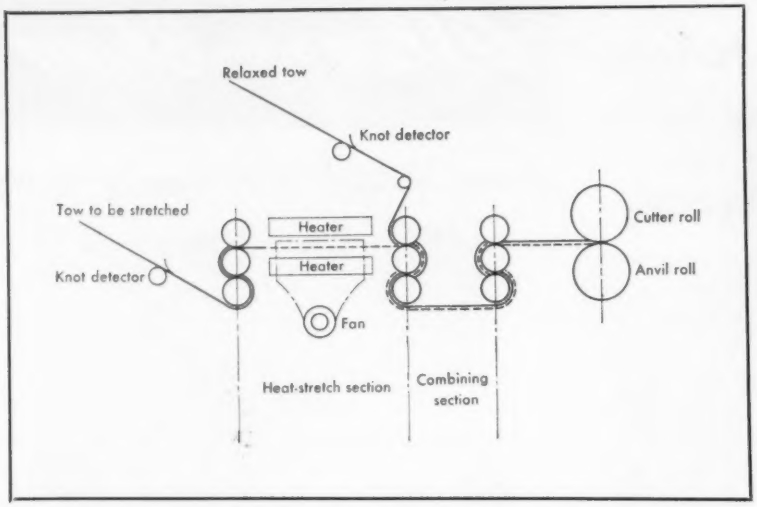
Pacific Converter Is Modified To Heat Stretch Orlon Tow



FEED TO PACIFIC CONVERTER is modified with two sets of rolls and heaters to heat stretch Orlon tow. Stretched and relaxed tow is blended into a feed for the standard converter mechanisms.

The Pacific converter can now process Orlon yarns for the knitting trade by Du Pont's new heat-stretch method.

Attachments for this purpose can be installed on machines in a few hours. New converters are equipped with the two sets of infeed rollers, which are spaced to take heater elements.

The heater elements will be optional equipment.

Stretched and relaxed tow enters the cutter as a sandwich, and both strands are cut together to make a proportional blend. The stock then passes through the converter in the usual manner. The rolls are driven from the anvil roll by a chain and sprocket, with fixed increments to control the degree of stretch.

Knot detectors protect both incoming strands of tow.

Heaters are in operation except when the machine is shut down. Overheating of the stock is prevented by an automatic control.

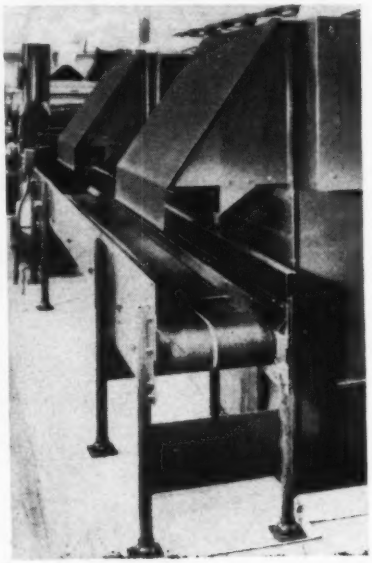
Normal productivity of the converter, 100 to 130 lbs. per hr., is maintained.

A new can coiler is available. This unit puts 20 lbs. of sliver into a 15x36-in. can.

The Pacific converter is made by Warner & Swasey Co., 5701 Carnegie Ave., Cleveland 3, Ohio. A converter equipped to heat stretch Orlon will be on display at Atlantic City.

Circle T-31 on Reader-Service Card

Improved Mixing Feed Table Developed

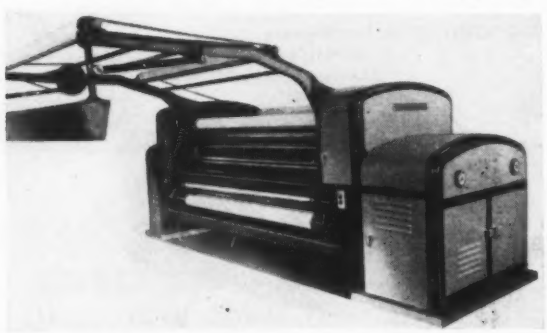


MIXING FEED TABLE mixes the stock from the delivery ends of blending feeders. This improved model requires ½ hp. less than the old model.

Features of the new Model K mixing feed table, made by Whitin Machine Works, Whitinsville, Mass., are said to be an extended use of fabricated steel, antifriction bearings, an improved drive, and a more attractive appearance. Production and working principles are the same as older models. The trough is 16 ins. wide with a minimum length of 14 ft., and the belt moves at 300 ft. per min. Power consumption has been reduced by about ¼ hp. A V-belt replaces the flat-belt drive formerly used.

Circle T-32 on Reader Service Card

Redesigned Napper Duplicates Napping Energy



TWENTY-FOUR-ROLL NAPPER will handle all-wool, wool-and-cotton, and wool-and-synthetic-fiber blankets. Napping energy can be accurately duplicated.

A new redesigned 24-roll napping machine for use in woolen-fabric mills will be shown at Atlantic City by Davis & Furber Machine Co., North Andover, Mass. The napper handles wool, wool-and-cotton, and wool-and-synthetic-fiber blankets.

Called the Simplex napper, Model L-3, it has sensitive dial controls and no change gears; so a predetermined finish can be automatically controlled on subsequent runs on the same fabric. No trial periods are necessary to duplicate a nap.

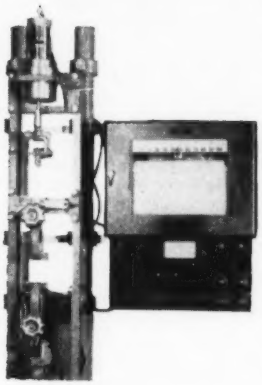
Available in 80-, 90-, and 100-in. widths, the napper features antifriction bearings and easy changes of the cloth speed. It can be easily changed from a double-acting to a single-acting napper.

Cleaning and lubrication downtimes are said to be negligible, and the machine is said to provide maximum safety for the operator.

Circle T-33 on Reader Service Card

TEXTILE *Equipment* NEWS

At the Textile Machinery Show



see the history-making Scott "ACCR-O-METER"

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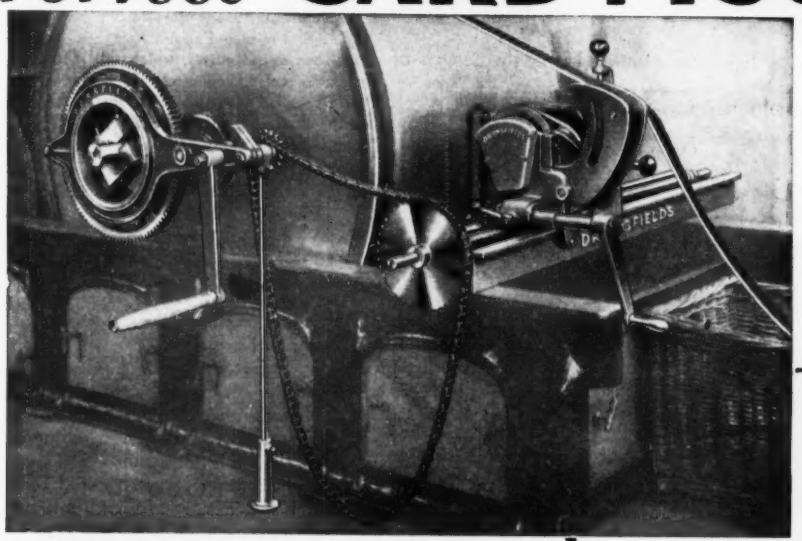

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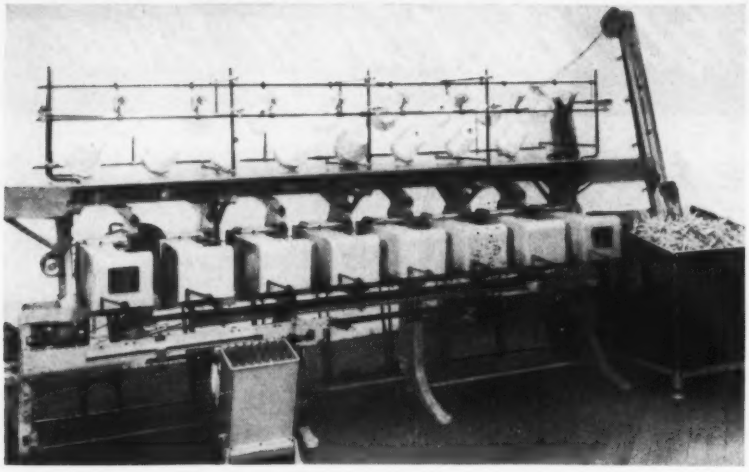
TEXTILE *Equipment* NEWS

Quiller Maintains Close Control of Wind and High Speed



AUTOMATIC QUILLER features an automatic bobbin feed, a magazine creel, and an optional pinboarding device. Yarn layers are locked by the traverse.

The Foster-Muschamp Model 66 is a high-speed bobbin winder with an automatic bobbin feed, automatic pinboarding (optional) or box-stacking device, and magazine creeling of supply cones. One operator can handle 5,000 lbs. of yarn per 8-hr. shift at a cost of about 19 mils per pound of yarn quilled. The machine is designed to wind at 15,000 rpm.

Flexibility is said to be the feature. Spindles are independently controlled; so different colors or numbers can be running on the same machine. All numbers and types of yarn are handled by the machine.

The build is controlled by a close-delivery thread guide, which travels almost parallel with the angle of the chase. No build adjustment is necessary for most yarns. False tension, distorted angles, strain, and piling are said to be reduced. A layer-locking device prevents sloughing, and a feelerless guide lays the yarn on precisely.

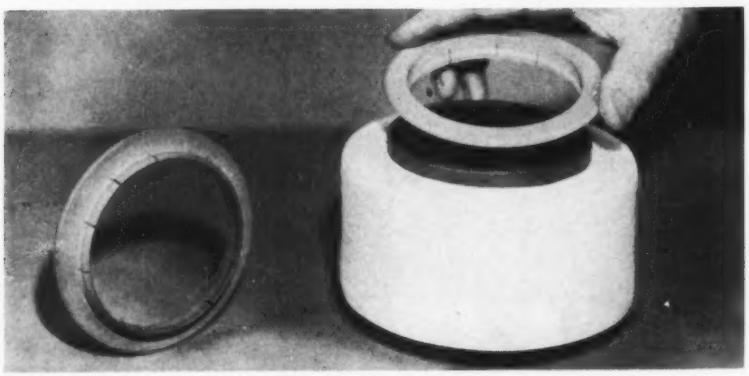
The yarn traverse is controlled from a three-lobe cam. Four traverse lengths, 1⅛ to 2⅛ ins., are selected by moving the cam follower to the appropriate track of the cam.

The stop motion is controlled by a light bar running along the length of the bobbin. Tensioners vary with the type of yarn.

The machine will be shown at Atlantic City by Foster Machine Co., Westfield, Mass.

Circle T-34 on Reader-Service Card

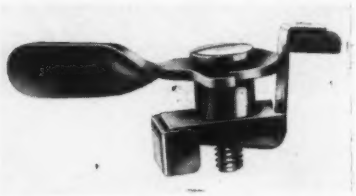
Redraw Caps Now Available for Dacron Shipping Tubes



ONE-PIECE REDRAW CAP for Dacron shipping tube is made of laminated plastic. Available from Synthane Corp., Oaks, Pa., the snag-free cap fits all current Dacron shipping tubes regardless of inside-diameter variations. It fits snugly but can be snapped on or off. Price per 100: $82.47 in lots to 500, $72.10 for lots above 500.

Circle T-35 on Reader-Service Card

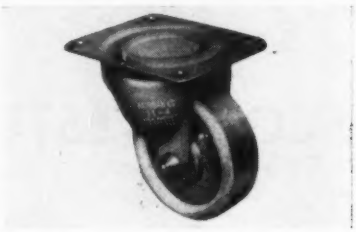
Whitin's Hand Brake Fits Wool and Twister Spindles



SPINDLE HAND BRAKE can be put on all Whitin wool-frame spindles and several types of Whitin twister spindles. According to the manufacturer, Whitin Machine Works, Whitinsville, Mass., no changes are necessary on the spindle. The brake also acts as a doffer guard and oil cover. It is conveniently mounted on the spindle oil post of the spindle bolster case. A positive cam motion holds the brake against the spindle.

Circle T-36 on Reader-Service Card

Caster for Mills Will Not Wear to Sharp Edge



FOUR-INCH CASTER for the textile industry features a pressed-steel, ball-bearing wheel. The caster is available in two models from Fairbanks Co., 393 Lafayette St., New York 3, N. Y. The model shown here is a double-ball-race swivel caster, which sells for $9.35 each. A companion model is made with a rigid caster. Price: $6.50. The feature of both is the drawn-sheet-tread that is said not to chip, wear to sharp edge, or absorb oil and grime.

Circle T-37 on Reader-Service Card

Special Bearing Grease Will Not Stain Cloth

A high-temperature grease for light, high-speed bearings that will not stain fabrics and has no odor has been developed by Tri-State Petroleum Co., 81st and Eastwick Ave., Philadelphia 42, Pa. Called T/S-21S, the grease is available in 100- and 400-lb. drums, 25-lb. pails, and 1- and 5-lb. cans. It has no melting point and will not break down or bleed. It can be pumped at temperatures below 0° F.

Circle T-38 on Reader-Service Card

TEXTILE *Equipment* NEWS

IS CONTINUED ON PAGE 271

TEXTILE WORLD

Reprints Available

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ENGINEERED TEXTILE DESIGN — **Set of 5 articles. $1.25 per set**
A series of articles of interest to those engaged in practical fabric design or in teaching functional design. One article introduces the all-fiber system, which takes the guess out of how many ends and picks to use in changing to a new fabric. Another shows how to change weight without changing structure. Detailed numerical examples are provided. A discussion of yarn diameters, as the basis of structure, opens the series.

SYNTHETIC-FIBER TABLE — **50¢ each, 40¢ in lots of 20 or more**
The latest (1953) edition lists by type and name all U. S. yarns and staple fibers in commercial production. A list of suppliers by type and form of fiber is also included. Valuable related data and a "Terminology and References" section are included. Comparative properties of wool and cotton fibers are included. An explanation of glass-fiber nomenclature and its yarn-numbering system makes conversion to cotton counts easy.

WOOL-SYSTEMS FLOW CHART — **35¢ each, 25¢ in lots of 20 or more**
New (1953) edition shows all the processes in making woolen and worsted fabrics on all yarn systems. Six typical finishing routines are also pictured to cover the main fabric types. The chart includes the manufacture of synthetic and blended fabrics on wool systems.

COTTON FLOW CHART — **25¢ each, 15¢ in lots of 20 or more**
An illustrated step-by-step process chart of cotton manufacturing from bale to finished fabric. Both principal and alternate flows are shown.

CONTINUOUS-FILAMENT FLOW CHART — **25¢ each, 15¢ in lots of 20 or more**
Principal and alternate step-by-step process in handling continuous-filament yarns from the case of yarn to the finished fabric (including tire cord) are shown.

KNITTING FLOW CHART — **15¢ each, 10¢ in lots of 20 or more**
The sequences of processes for the subdivisions of the knitting branch of the industry—women's hosiery, men's full-fashioned hosiery, half-hose, and knitted underwear and outerwear (circular and warp)—are shown and illustrated.

FELT FLOW CHART — **15¢ each, 10¢ in lots of 20 or more**
Manufacture of roll felts, sheet felts, and felt wheels is shown in step-by-step order.

COTTON-FIBER TABLE — **25¢ each, 15¢ in lots of 20 or more**
Revised (1953) edition shows fiber properties and manufacturing performance of the 11 varieties of cotton that make up more than 80% of the U. S. cotton grown. Data given enable mills to save money by selecting the best fiber for the end product.

TEXTILE BIBLIOGRAPHY — **25¢ each, 15¢ in lots of 20 or more**
An up-to-date listing of the important English-language books on textile technology. Twelve-page folder lists more than 1,400 items in 20 categories and includes a directory of publishers.

SHRINKAGE TABLES — **25¢ each, 15¢ in lots of 20 or more**
These tables permit quick determination of ½ to 25% shrinkage, covering pieces from 50 to 100 yds.

THE SUPERVISOR AND HIS JOB (April, '53). — **25¢ each, 15¢ in lots of 20 or more**

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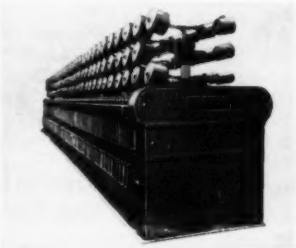

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NEW Dyes AND Chemicals

Stabilized Azoic Dye For Cotton and Rayon

National Aniline Div., Allied Chemical & Dye Corp., New York, N. Y., announces an addition known as National Naccogene Yellow GS Powder to its line of stabilized azoic dyes. When printed on cotton and rayon, it produces greenish shades of yellow, has good stability, and is compatible with starch-tragacanth printing pastes. The dye is fast to light, rubbing, hot pressing, boiling soap or soda, peroxide bleaching, washing, perspiration, and sea water. It can also be used along with the leuco vat ester dyes such as the National Solvats to produce launderable multicolor prints.

Circle D-1 on Reader-Service Card

Green-Blue Dyestuff For Wool, Nylon, and Silk

Sandoz Chemical Works, Inc., New York, N. Y., announces a new bright green-blue dye having excellent fastness properties on wool, nylon, and pure silk.

It is recommended by the producer for dyeing worsted top and raw stock. In combination with Lanasyn Green BL Pat., all types of blue and green shades where maximum fastness is required may be produced. Like other colors in the series, the dye can be combined with chrome colors.

Circle D-2 on Reader-Service Card

Diazo Color Salt For Cotton and Rayon

National Violet BN Salt, a new addition to the line of diazo color salts by National Aniline Div, Allied Chemical & Dye Corp., New York, N. Y., is applicable to cotton and viscose rayon by printing and dyeing processes generally employed for dyes of this type.

The salt produces a yellow with National's Naphthol AS-G bottom and varying shades of violet and bordeaux with the other National naphthols, with fastness to light, washing, soda boil, acids, alkalis, and peroxide bleaches being from good to excellent.

The producer recommends the salt for printing and dyeing cotton and rayon materials used in sport and play clothes, decorative fabrics, and other fabrics exposed to sunlight and vigorous laundering.

Circle D-3 on Reader-Service Card

Direct Blue-Gray Dye For Cotton and Rayon

National Solantine Grey GVF is the newest addition to the direct dye group of National Aniline Div., Allied Chemical & Dye Corp., New York, N. Y.

Producing shades of blue-gray on cottons and rayons processed by standard methods, this dye is also fast to light, perspiration, and crocking on viscose rayon. The dyed fabric, when aftertreated with urea-formaldehyde resin in conjunction with National Naccufix for crease resistance, is faster to washing, with no loss in lightfastness, and is suitable for use in women's and children's dress goods, suitings, beachwear, and sportswear.

Circle D-4 on Reader-Service Card

New Chelating Agent For Trivalent Iron

To prevent problems caused by trace iron in wet processing, Bersworth Chemical Co., Framingham, Mass., has developed a product to control trivalent iron.

The product, known as Versen-Ol, is the trisolium salt of N-hydroxy-ethyl-ethylene diamine triacetic acid and is soluble in water and stable throughout the pH range.

It is said that by using Versen-Ol it is possible to control trivalent iron over a wide pH range, even in highly alkaline solutions. After chelating the iron, any remaining Versen-Ol will inactivate other heavy metal or alkaline earth ions such as lime or magnesium.

Circle D-5 on Reader-Service Card

Premetallized Acid Dye for Woolens

A new nondusting, premetallized acid dye, known as National Chromolan Green BL, has been announced by National Aniline Div., Allied Chemical & Dye Corp., New York, N. Y.

This dye produces bluish-green shades of moderate brightness on wool and is recommended for dyeing unneutralized carbonized pieces, woolen pieces in a highly acidic condition, and materials that have been acid chlorinated. It has good fastness to light, steaming, carbonizing, acids, acid perspiration, spotting, rubbing, sea water, and cold water. The product is recommended for use in colored carpet yarn; knitting yarns for hosiery, sweaters, and bathing suits; and women's dress goods.

Circle D-6 on Reader-Service Card

New Emulsion Forms Tough Water-Resistant Film

The Resin Div., National Starch Products, Inc., New York, N. Y., announces the development of a new water-resistant polyvinyl-acetate emulsion.

Known as Resyn 10K-25, the emulsion is said to form highly water-resistant films having both toughness and gloss.

Circle D-7 on Reader-Service Card

Fast Color Salt For Cotton and Rayon

National Red AL Salt, a stable diazonium salt derived from anthraquinone, is another addition to the line of fast-color salts of National Aniline Div., Allied Chemical & Dye Corp., New York, N. Y.

Used to develop the various National napthols' varying shades of red, scarlet, yellow, and brown, it can be applied to cotton and rayon raw stock, yarn, or piece goods. The dye can be applied in open tubs, by pressure-dyeing machinery, in the jig or reel, or by the continuous-padding method.

A feature of this dye, it is said, is its outstanding lightfastness, which is rated very good to excellent for most dye combinations. According to the producer, materials colored with National Red AL Salt will withstand vigorous laundering and can be resin finished for crease resistance with practically no change in shade or lightfastness.

Circle D-8 on Reader-Service Card

New Violet Dyes For Wool, Silk, and Nylon

Ciba Co., Inc., New York, N. Y., announces a new violet dye that yields very bright shades on wool, with good fastness to light, washing, perspiration, and sea water. Dyed materials are fast to carbonizing and decatizing and exhibit fastness to alkaline milling. The dye is also resistant to chrome and so may be used for brightening chrome colors.

Although cotton, viscose, and acetate are unaffected by the dye, it produces fast colors on silk and nylon.

The dye is recommended for dyeing loose wool slubbing, yarn, lightweight quality wool fabrics, silk, and nylon. It is also suitable for printing on wool and silk and for vigoureux printing.

Circle D-9 on Reader-Service Card

Vat Yellow Dye For Cotton and Rayon

A new anthraquinone vat dye said to produce clear shades of golden yellow on cotton and viscose rayon has been announced by National Aniline Div., Allied Chemical & Dye Corp., New York, N. Y.

This dye, known as National Carbanthrene Yellow 3GFN Double Paste, reduces to gray leuco at 140° F. and dyes levelly and uniformly in a moderately alkaline bath at 120° F. Since it has good solubility and dispersibility, the producer recommends the use of the dye for pad-jig application and pressure dyeing.

Materials so dyed, it is said, are fast to boiling soap, chlorine and peroxide bleaching, mercerizing, and cross dyeing in addition to being fast to light and having exceptional resistance to laundering. The dye may also be used as a component in mixtures producing a variety of browns, tans, yellows, and taupe and beige shades.

Circle D-10 on Reader-Service Card

LETTERS FROM OUR READERS

Round Table

Address all communications to:
Editor, *Round Table*, TEXTILE WORLD
330 West 42nd Street, New York 36, N. Y.

THE METRIC SYSTEM AGAIN

Dear Editor:

I have seen for the last years that . . . your readers have been talking and making a great fuss over the adoption of a universal numbering system for textile products.

We who are from countries that have used the metric system since it was invented cannot understand why such a simple thing . . . is so difficult for you.

We know and you know and everybody knows that the metric system is the best.

We understand that you were too proud to accept this system because it was a foreign one; and now that you have industrialized so much, you think it is impossible for you to . . . change to the metric system because it would involve a great expenditure. And so you have to go on forever and ever with this weight on your backs and be regarded by all the other nations as a backward and stubborn people.

But . . . I think that adopting a universal numbering system for textiles would not involve a great loss. On the contrary, it would mean a benefit for you to adopt the metric system.

Why is the metric system best? Trying to explain that is like trying to explain why day is bright and night is dark. Anyone who does not understand that should go back to kindergarten.

The stubborness of not adopting the metric system is the same that keeps us from accepting a single language like Esperanto, or any other language easy for everybody to learn and use, to promote understanding between people, erase the frontiers of all nations, finish all wars, and let us live in peace.

FRANCISCO MONSECH, JR.
Toluca, Mexico

—AND AGAIN

Dear Editor:

Thank you . . . for including a notice about our sectional warper on page 142 of your Jan. issue.

We are sorry to have expressed the maximum speed in meters, which often causes trouble in countries that have not adopted the metric system. Actually, the speeds of the machine reach 1,640 ft. per min. and not 164 ft. per min. only as reported in your Jan. issue.

M. MEALLI,
Managing Director
Tessiltecnia S. R. L.
Florence, Italy

SCREWDRIVER SAFETY

Dear Editor:

Along with being one of the most common tools, the screwdriver is also one of the most commonly misused tools.

Here are a few essential rules that should be followed by everyone who uses a screwdriver:

1. For electrical work, use only screwdrivers with insulated handles.
2. Don't use a screwdriver as a pinch bar, drill, or chisel.
3. Keep the point of the tool ground to a true surface.
4. Use the proper size of screwdriver so that it won't slip from the slot being turned.
5. When you're using a screwdriver from a position on a ladder, brace yourself well.
6. Don't hold work in your hand when you're using a screwdriver on it. That's a good way to cut your hand.
7. Use a leather pouch with individual slots for carrying screwdrivers around. Insert the tip down to keep from gouging out someone's eye when you go up or down ladders.

PAUL C. ZIEMKE
Oak Ridge, Tenn.

CONTINUED ON NEXT PAGE

TEXTILE TICKLES . . . . . *By Edgar Allen, Jr.*

"Just what are you mixing in the mixing pickers, Sously?"

START EMPLOYEES OFF RIGHT

Dear Editor:

In the absence of a training school, the overseer of the spinning department is often in charge of training new operators. Selected applicants should be put under the best operators in the department for several weeks. These spinners not only should teach the learners how to piece up, creel roving, clean thread guides, etc. but also should show them how to punch the time card, give them a resume of company rules, and tell them who is who and what is what.

After two or three days, the overseer could take the learners on a tour of the entire plant. All processes could be briefly explained and the importance of spinning in the scheme of things made plain. The organization, aims, and regulations of the company could be gone into more fully; and wage rates and the chances of promotion could be explained.

N. H. Pomfret

Hamilton, Ont.

OVERDRIED COTTON

Dear Editor:

Who says overdrying at the gin does not affect processing characteristics of cotton?

Here are a few comparisons between cotton ginned with no heat (Lot A) and cotton run through on double-high heat (Lot B).

Lot A had only 34.5 ends down per thousand spindle hours vs. 65.0 for Lot B. This one fact meant that the spinner on lot B could handle only 74% of full load and that our labor costs for this overdried cotton were 127% of normal.

Lot A had 0.76 loom stops per hour vs. 0.97 for lot B. On this basis, a weaver could handle only 78.7% of a full load, and our costs were 127% of normal.

Waste for Lot A cost us $1.36 per pound of finished cloth, but for lot B this cost was $1.76.

The cotton received by mills must be good enough to allow the mills to operate at peak efficiency to remain in business.

If cotton mills go out of business or switch to a competitive fiber, who will buy the superheated, supercleaned, supercostly cotton?

It is time the mills took decisive action to correct this situation.

Joe L. Delany

Joanna Cotton Mills Co.
Joanna, S. C.

WHERE THE MONEY WENT

As part of its effort to keep its employees informed about the economics of operating textile mills, Cone Mills' company paper, *The Textorian*, devotes three quarters of the front page of its March 19 issue to a breakdown of Cone's 1953 annual income statement. A silver-dollar pie chart shows what happened to each dollar Cone Mills took in in 1953.

Questions AND Answers

Two Ways To Make Nubs

Technical Editor:

Our mill is going into nubby tweeds and I would like to know the best way to mix the nubs. (9769)

There are several ways to handle nubs, but the best way is to use a nub box on the top of the finisher card. This box is similar to a trough, and it is driven from a worker through a set of gears. By adjusting the gears and setting the nub box feed roll, you can get as many nubs as far apart as you want. Set the following workers up, and forget about the finisher as a carding machine.

Another way is to put the nub box on the first breaker. Set the workers off, and get the carding action between the ring doffer and the cylinder.

Regular Reclothing of Cards Can Save $2,200 per Year

Technical Editor:

We're having a hard time convincing our boss carder that it's wise to reclothe the woolen card regularly. Any suggestions? (9770)

Try this simple dollars-and-cents argument:

A mill running its cards at 50 lbs. per hr., two 40-hr. shifts, 50 weeks per year is producing 200,000 lbs. per card per year. If the cost is 10¢ per lb., the card production costs $20,000 per year.

Now, if the card has to be slowed down 10% because of old clothing, the production is 45 lbs. per hr. and the cost is 11¢ per lb. If you figure out the difference, you will see that the mill is losing $2,200 per card per year because the cards weren't reclothed regularly.

Filter Fabrics Are Made In Many Constructions

Technical Editor:

Can you supply the properties and uses of industrial filter cloths? (9768)

There are over 100 types of filter cloths used for industrial purposes. Among these are the following basic weaves: numbered ducks, twills, chain cloths (broken twills), flat ducks, pottery ducks, press cloths, osnaburgs, sheetings, drills, sateens, lawns, lenos, terry cloths, and multiple fabrics that are composed of four or five cloths interlocked by the warps and fillings of the separate cloths.

These basic constructions of cloth are made from the following fibers: cotton, silk, wool, camel's hair, nylon, glass, Orlon, Vincel, and saran. These fabrics are used for either wet or dry filtration.

Products wet-filtered are chemicals, pigments, dyestuffs, petroleum, paints, oils, animal fats, starches, ores, and anode bags for the electroplating industry. Dry-filtration cloths are used in dust-collection systems in various industries and for filtrating gaseous elements in the chemical industry.

The types and construction of the fabrics used vary with the size and pressure employed in the filter and the type of equipment and the product to be filtered. Depending on the end use of the filter fabric, the following characteristics must be considered: the proper rate of filtration, which is basically the porosity of the cloth; the mechanical strength of the fabric; the resistance of the liquid being filtered; the finish of the fabric to determine the desired cake discharge; and the necessity of having the filter cloth shrink resistant, and to what degree. Before any specific filter cloth is used, immersion tests should be run under the exact conditions to which the filter cloth would be subjected.

Don't Let Your Lifter Rods Get Stuck

Technical Editor:

How can we prevent trouble with stuck lifter rods on our spinning-frame ring rails? (9765)

A wiping device is made with a heavy steel-wire loop wound around with a hard-twisted cotton cord. The loop is attached to the spindle rail and entirely encircles the lifter rod. The up-and-down movement of the lifter rod through the cord-wound loop wipes off any waste and prevents clogging of the rod in the bushing.

One mill reports the use of split bushings on the spindle rail to enclose the lifter rods. Each half of this split bushing can easily be taken out, cleaned of any waste accumulation, oiled, and replaced. Keeping these

split bushings clean prevents stuck rods.

Another mill states that excessive oiling can cause waste accumulation and stuck rods. The rods should be cleaned and oiled sparingly with an oily rag.

In another mill, the rods were removed and milled down to a triangular cross section and replaced. This three-point contact of the rod with the bushing prevented any collection of waste. Waste on the rods was wiped off by the bushing and forced into the open spaces between the three points of contact of the triangular-shaped lifter rod.

Cavitomic Cotton Tested For pH by Two Methods

Technical Editor:

How are tests for measuring the pH of cavitomic cotton made? (9764)

Any method of measuring pH is applicable. In the laboratory, a cotton-to-water ratio of 1 to 3 may be used. By centrifuging, the extract is recovered and measured either by a Beckman pH meter or by an indicator.

For rapid semiquantitative determination, this solution can be used:

1 liter distilled water

20 ml. Gramercy Universal Indicator

1 ml. Santomerse S (a nonionic wetting agent)

Use a cotton-to-liquid ratio of approximately 1 to 5. The cotton is simply immersed in the solution.

The pH test is applicable only to cottons within a few months of ginning. The pH may change to almost neutral after several months of storage.

Rubber Constitutes About 30% of Elastic Cloths

Technical Editor:

How much rubber yarn is used, what is the number of picks, and what size of rubber is used for filling to give a certain width of cloth? (9766)

Elastic filling yarn with a rubber core covered with two yarns, one of cotton and one of acetate, is generally woven on a 28 ppi. basis. The amount of rubber core used for this type of yarn is approximately 30% of the total weight of the finished yarn.

There are two types of synthetic- and natural-rubber yarn used for cores; the round monofilament made by forcing a solution of the rubber through a small orifice, and the cut type made by cutting thin sheets of the rubber into square yarns. For this particular core yarn, the size of a round monofilament would be 60s or 75s (60 or 75 ends of rubber yarn to the inch) and in a cut-rubber yarn the size would be about 70s or 85s.

Two Ways To Prevent Double-Balloon Throwing

Technical Editor:

We recently bought some used uptwisters to start throwing our own nylon tricot yarn, and it looks as though we will have to buy redrawing equipment too. The uptwisters had been working from 10-in. pirns at 11,000 rpm., but our nylon is delivered on 12-in. pirns. We get a double ballooning at each end of our double-tapered packages at 9,000 rpm. Do you have any suggestions we can try to eliminate the double balloon? (9767)

Here are two ideas that you can try:

1. Increase the distance from the spindle to the first pigtail guide.

2. Use a large balloon guide between the spindle and the first pigtail guide.

If neither of these ideas works in your mill and the manufacturer of the equipment cannot suggest any mechanical changes that would correct the double ballooning, the only alternative would be to redraw the yarn onto spools.

Worsted Knitting Yarn Is Improved With Emulsion

Technical Editor:

We run our worsted and zephyr knitting yarns between wax disks when we wind from skeins to cones. We have received complaints from knitters about insufficient wax on the yarn. What can we do to improve this situation? (9733)

When paraffin-wax disks become worn or a groove appears in one disk, the amount of wax transferred to the yarn is negligible. To overcome this situation, make sure that the wax disks are kept turning and that badly worn disks are not used. A British winding machine with revolving wax disks does a good waxing job.

Worsted yarns can be treated with an emulsion made with clear self-emulsifying oils. The oil is diluted with water to a 5% to 10% concentration. A small amount of softener can be added to improve knitting still further.

The emulsion is applied on a winding machine equipped with a trough and a roller. The roller is partly immersed in the emulsion and slowly turned from the winder mainshaft. The yarn is run from the swift or runner through an eye on the trough, over the roller surface, through an eye on the other side of the trough, and to the cone.

The amount of emulsion applied to the yarn can be varied by threading the yarn through eyes that are not opposite. Lubrication of dyed yarns used for garments that are not to be scoured should be kept low.

Hot Stretching of Nylon Cord Increases Tenacity

Technical Editor:

What advantages does hot-stretching treament have on nylon cord, and when is it done? (9771)

The properties of a nylon cord can be altered by giving the cord a hot-stretching treatment. Some of the more significant changes resulting from this treatment are an increase in tenacity, a higher modulus of stretch, and a decrease in breaking elongation.

In all cases, the final product, rather than the components going into the product, is stretched because the lower modulus of a twisted or braided structure is largely due to soft stretch imparted to the structure by the twist. Stretching the final product increases the modulus by a greater amount than does stretching the component parts.

Puckering in Nylon Sheer Is Due to Uneven Tension

Technical Editor:

Our 94x98 nylon sheer fabric is puckered in a warp-pattern effect. What causes these puckers? (9760)

A. The trouble is probably due to uneven tension placed on the yarn in twisting and slashing. Try these suggestions:

1. Check the tensions on each individual twister end at the beginning of each creeling.

2. Check the tension on each section beam at the slasher with a tension meter and make the tensions all the same. Self-aligning antifriction bearings are almost necessary for this type of work.

3. Pull the yarns off the section beams against live weights. The weights should be on the side farthest from the loom beam being made.

Kinks AND SHORT-CUTS

Stop Motion on Race Plates Helps Heavy-Yarn Weaving

The feeler wires on our center stop motions on 110-in. C&K W-3 looms often become bent because we run heavy yarns that are woven into felts and heavy blankets. When the wires become bent, they often throw shuttles out of looms, make mispicks, and make extensive "comb-outs."

We have connected our race plates to the electric warp stop motions so that the looms stop when the feeler wires become bent.

An extension wire is placed on the connection at the warp-stop-motion contact bars and is run along the back girder of the loom to the center girder, across the center girder to the center lay sword, and up the lay sword to the steel race plate. The insulation is removed from this end of the wire, and the naked end is placed under the loosened race plate. Then the race plate is retightened firmly to make a good contact.

When a race plate is divided in the center, a section of wire must be connected from the other side to form a "jumper."

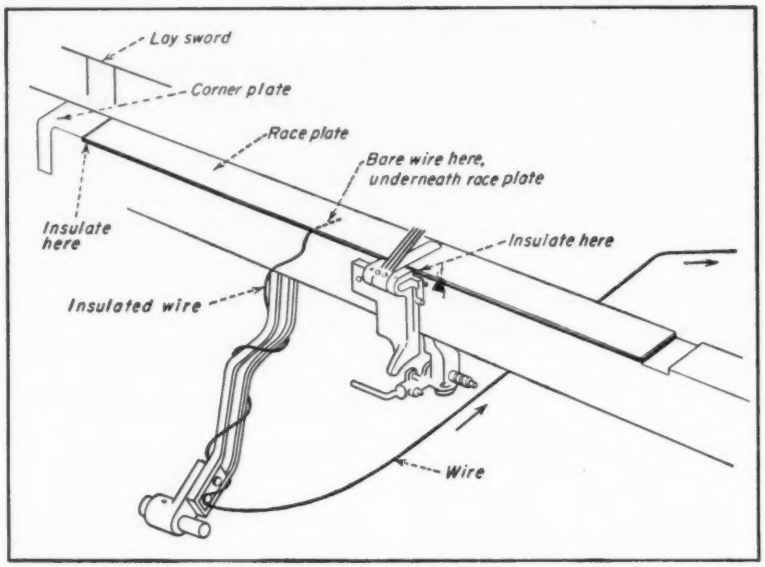
The race plate must be fully insulated. Check the corner plate at the head end of the lay, and file off the edge that touches the race plate. Check the lay swords to make sure that they don't touch the race plate. If they touch, shim them away from the race plate with a piece of heavy paper.

Check the stand on the lay beam for the center filling stop motion to see if the stand touches the race plate. Shim it out with paper to break the contact if it does touch.

Now the race plate is fully insulated and acts as an added warp-stop-motion contact bar to stop the loom.

If the center stop-motion feeler wires become bent and strike the race plate instead of dropping into the normal position in the well, the warp-stop-motion solenoid stops the loom just as if a warp end had broken.

This extra stop motion can be rigged up in a few minutes. All that's needed is 12 to 15 ft. of electric wire and a little work. *William Wagner, Covington, Ohio*



WIRED RACE PLATE forms a stop motion with a bent center filling-stop-motion feeler wire and results in better cloth on heavy weaves.

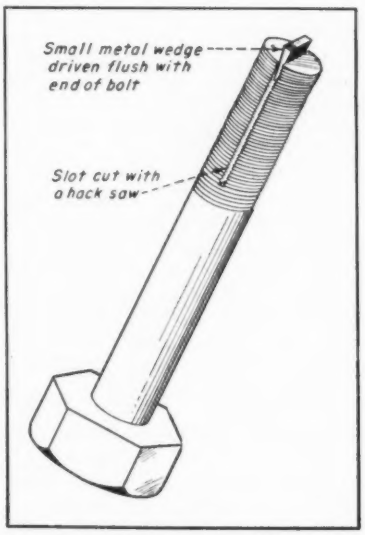
A Slot and Wedge Makes Bolts Hold in Wood

When wood bolts work loose in wood beams of various kinds, it often means replacing the entire new beam. Sometimes oversize bolts can be used to correct the damage, but space limitations sometimes prevent their use.

If the old bolt is altered by the method we use, it will hold well in the damaged hole. The bolt is split lengthwise down the center of the threaded end to the end of the threaded surface that will be imbedded in the wood. Then a thin iron wedge is driven into the end of the cut slot.

The bolt is put back into the hole in the wood and retightened with a wrench. As the bolt is screwed in, the bolt surface expanded by the wedge is forced down the hole in the wood. The bolt is then held firmly in the wood.

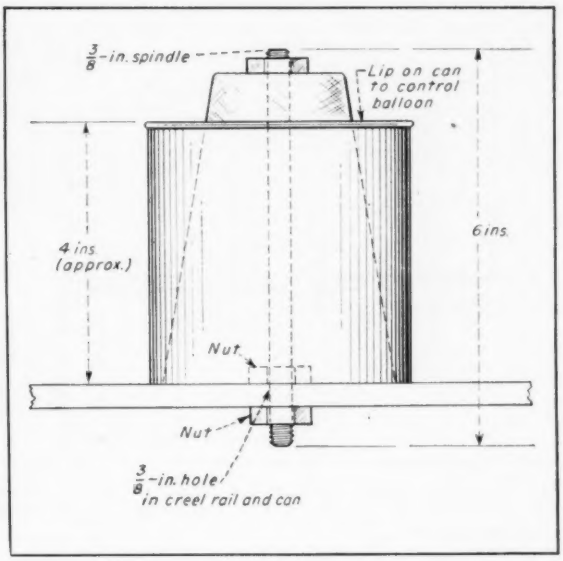
The cost of the repair is only a slight amount of labor in sawing the slot in the bolt and fashioning the wedge from a small scrap of metal. *W. E. Warner, Essex England*



A STEEL WEDGE driven into a slot cut in a loose bolt will firmly seat the bolt.

Tin-Can Balloon Control Helps Us Warp Fancy Yarns

TIN CANS stop fancy-yarn warping troubles. The balloon is better controlled, and production is more than doubled.



A SPINDLE and two nuts support the cone in the center of the can and hold the can on the creel.

We had considerable trouble when we made fancy warps containing splash, nub, hard-twist, and reverse-twist decorative yarns. The decorative yarns would snarl with the ground yarns when the warper was running because the yarn balloons would overlap in the creel.

I was able to cure this problem by controlling the balloon with a tin can set over the cone of decorative yarn as shown in the accompanying photo.

I used cans about 4 ins. tall and 4 ins. in diameter, with a lip around the upper edge of the can. I fixed the can to the creel rail with a 6x$\frac{3}{8}$-in. spindle by drilling a $\frac{3}{8}$-in. hole in the center of the can bottom and a corresponding hole in the creel rail. The spindle was threaded at one end, and the tin was kept tight on the creel with two nuts.

We can now run our warper at higher speeds with no trouble. Our production has doubled, and we get better warps. *A. Spivey, Huntingdon, Que.*

$500 for Best Kink in 1954
$25 for Best Kink in Each Month
In Addition to Space Payment on Acceptance

You undoubtedly know many Kinks and Short-Cuts that are helpful to mill operators. Write them down and send them in. We pay promptly on acceptance—before publication. In addition, your Kink may win the $500 check for the best Kink of the year or the $25 check for the best Kink of the month; maybe both!

Send in your Kink now. There is always a contest going on. The more good Kinks you send in, the better your chances of winning a prize in addition to earning some easy money for every Kink accepted.

We will polish up your writing and will have an artist make finished drawings. But send in plenty of details so that your Kink can be clearly explained. Be sure your sketch is clear and well labeled, but it need not be a polished job. Best of all, send us a good glossy photograph of it; we will pay you extra if you do and we can use it.

Look over the Kinks in this and other issues. You will get ideas you can use as well as inspiration for Kinks you can send in. We like items that pertain to ways for improving machines, new devices that a mill man can build, attachments or methods of merit—anything that will cut costs, improve quality, or help production.

Your published Kink will be judged impartially by other mill men. In cases of ties, duplicate prizes will be awarded.

RULES OF CONTEST

1. No limit to number of entries.
2. New $25 prize contest every month, $500 prize contest for the year. Monthly contest confined to Kinks published that month, yearly to those published in calendar year 1954.
3. All Kinks paid for on acceptance; extra payment for photographs. Drawings need not be finished (clear detailed pencil sketches will do).
4. Previously published material not eligible for prizes.
5. Unless you advise to contrary, we assume we may sign your name to Kink when published.
6. Prize winners will be selected by readers, a different group each time. At least 200 will be asked to select preferred Kinks in each issue. Their votes will select the best Kink, and their decision will be final.

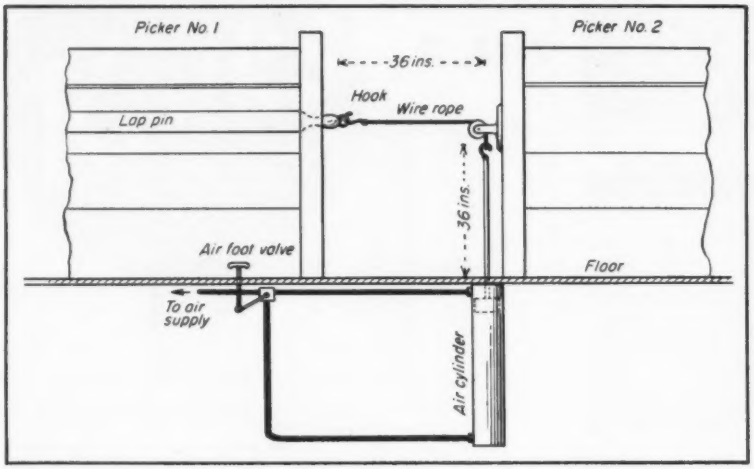
Send Kinks to:
KINKS CONTEST, TEXTILE WORLD
201 E. Coffee St., Greenville, S. C.

Use This Device To Re-cover Take-Up Rolls

How Many Jobs Does

Kinks and Short-Cuts

Pneumatic Lap-Pin Puller Simplifies Picker Operation



LAP-PIN PULLER on synthetic picker gets its pull from an air cylinder set under the floor. A foot valve causes the piston to go down and pull the lap pin out through a wire-rope-and-pulley arrangement.

The picker tender in one of our mills was having difficulty removing the lap pin from synthetic-fiber laps; so we devised a pneumatic puller to do the job for him.

First we tried a system of levers, but the task was still a back-breaking one.

Basic materials that we used were an air cylinder with 36-in. stroke and 4-in. bore, a length of wire rope, a small pulley, and a couple of hooks.

We put the air cylinder below the picker-room floor, but its position is not critical. You could suspend it horizontally or vertically from the ceiling just as well.

Our cylinder is set vertically, as shown in the sketch, 36 ins. from the handle of the lap pin. Since our next picker is about that far away, we used it as a rigid support for the pulley in which the wire rope that connects the lap pin with the piston runs.

The cylinder is connected to our 80-psi. air line and is operated from a foot valve at the front of the picker.

A 36-in. stroke was selected because we didn't want the pin pulled completely out of our 40-in. laps.

Now, when the lap is ready to be doffed, the picker tender attaches the hook to the lap pin, steps on the foot valve, and the pin slides out. Then he unhooks the rope and pulls the pin the rest of the way out.

This system has worked so successfully on our synthetic picker that we are planning to put the same thing on our cotton pickers. *J. R. Wikle, Charlotte, N. C.*

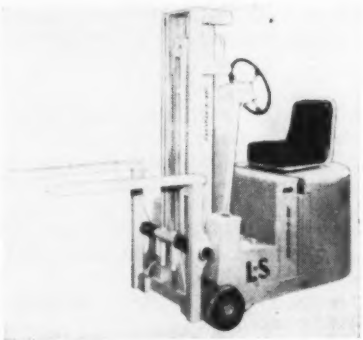
Steps on Knitting Machines Help Knitters and Fixers

In fixing our large-diameter knitting machines, our fixers frequently had to stand on a wooden box to do the job successfully. The wooden box would often lie around the knitting room and become a safety hazard.

A step was made for each machine from a piece of 8x2x¼-in. mild steel bent in the middle. Two ⅜-in. bolt holes were drilled in one side of the step, and the step was screwed to the leg of the knitting machine where it did not project into the alley.

The knitters and fixers like the new step because they find it more comfortable and safer than the box. *Dan Singer, Newton, Mass.*

Invert Lift-Truck Forks To Increase Lifting Height



UPSIDE-DOWN FORKS on a fork lift truck increase lifting height without increasing mast height. You can still get the truck through the same doorways, but you can lift almost 3 ft. higher. *Lewis-Shepard, Watertown, Mass.*

Hand Buff Roving Rolls To Prevent Eyebrows

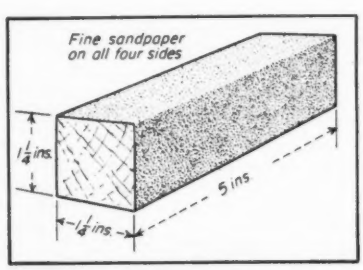
Composition front top rolls on roving frames often cause us trouble by forming excessive eyebrows or curtains. These eyebrows build down from the top rolls and, unless picked off or tucked up frequently, come in contact with the roving strand. Small pieces of clearer waste are plucked off into the strand and cause trouble on later processes or make imperfect finished yarn.

Newly buffed top rolls rarely cause these excessive eyebrows because the roll surface is rough enough to hold the fibers and carry them well up into the clearer flannel. After a new roll has run for a short time, it acquires a slick, glassy surface without sufficient bite to hold the fibers on the roll. These fibers are wiped off by the front edge of the clearer board and collect there until they fall or are plucked off into the roving strand.

We found that a very light buffing removes this slick surface on the front roll and restores the original bite. This light buffing may be done without removing the rolls from the frame and with no injury or undue wear to the rolls.

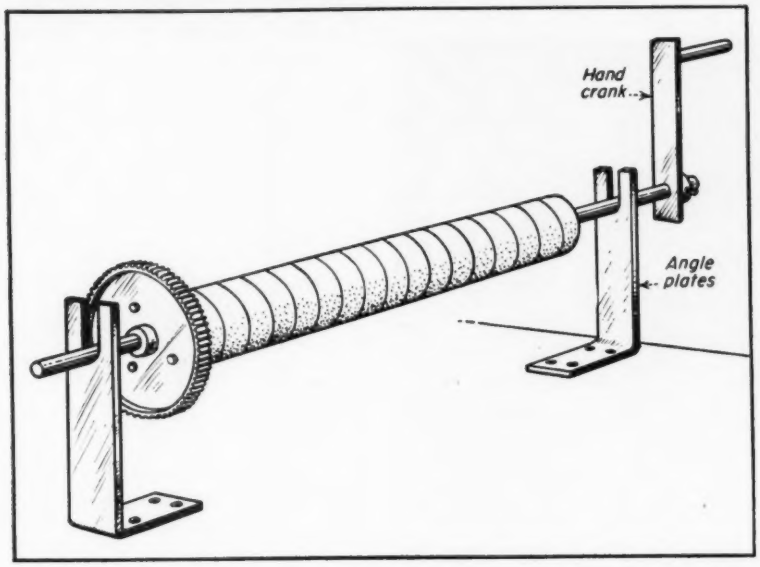
Glue fine sandpaper to the four sides of a small wooden block 5 ins. long and 1¼ ins. square. Hold one of these sandpapered sides in light contact with the top rolls while the frame is running, and the slick, glassy surface will be easily removed. All front rolls can be quickly treated.

Any accumulation on the sandpaper can be brushed off to prevent it from getting into the work.



COVER A BLOCK with fine sandpaper and hold it against the front top roll on a roving frame to restore the original bite and prevent eyebrows.

Use This Device To Re-cover Take-Up Rolls



TAKE-UP ROLLS are covered quickly and neatly when they're placed in the angle plates on a workbench and turned with a crank.

Re-covering take-up rolls with rubber or composition covering material is always a ticklish job.

We have made a device to quickly and easily re-cover take-up rolls after they're removed from looms.

Two angle plates are made from flat-iron stock 12 ins. long, 3 ins. wide, and $\frac{3}{8}$ in. thick. One end of the stock is bored 2 ins. from the end with a drill $\frac{1}{8}$ in. larger than the take-up-roll journal. Then the stock is slotted to the hole.

Four $\frac{3}{8}$-in. holes are bored in the other end of the stock for lag screws. A 4-in. section containing the lag-screw holes is bent at right angles.

A crank is made from flat-iron stock, a collar with a setscrew, and a section of round cold-rolled steel. The collar is just large enough to slide easily on the journal of the take-up roll. One end of the flat stock is welded to the collar, and the other end is bored to receive a section of $\frac{3}{8}$-in. round stock 6 ins. long to be used for a handle.

One angle plate is fastened with lag screws to the edge of the front corner of a long workbench. The other angle plate is fastened to the backbench so that the take-up roll can be dropped into the slots and be supported by the angle plates.

To re-cover a take-up roll, the whole take-up-roll assembly, including the 75-tooth gear, is placed in the slots. The collar of the crank is slipped over the end of the take-up-roll journal at the corner of the workbench, and the setscrew in the collar is fastened.

The old covering is removed. The surface of the roll is cleaned thoroughly and is roughened with coarse emery cloth. Glue is applied to the roll and, for best results, should be allowed to dry slightly before the new covering is applied.

The take-up-roll covering is held on a reel placed on the floor at the front of the workbench. When the roll covering is put on the roll, one man turns the crank and another man guides the covering at the correct angle.

The device is built cheaply and does a neat job of re-covering take-up rolls. *Eugene P. Schremp, Waterville, Me.*

Put Buckets on Wheels

We welded four iron brackets to the bottom of large floor-cleaning buckets and fixed casters to them.

The janitor now pushes the bucket across the floor as he cleans. The larger-size bucket holds more water and eliminates the frequent changing of water necessary when we used small hand pails. *D. Singer, Newton, Mass.*

Monel Nails Save Tank

Nails in the planking of a power plant's cooling tower kept working out and broke off when hammered back. The planks came loose, and the tank leaked. A change to Anchorfast nails of corrosion-resistant Monel saved the tower. The rings on the nail shank wedge into the wood and hold the nails securely.

How Many Jobs Does Your Fork Lift Truck Do?

Are you getting full use from your lift truck? Here are a few extra uses suggested by Automatic Transportation Co.:

1. As a portable elevator for changing ceiling lamps, fixing pipes, cleaning high places, and hanging posters and signs
2. As a heavy-duty jack in the machine shop or maintenance department
3. To move heavy or bulky equipment during floor repairs, painting, or cleaning
4. To service or repair fixed machinery. Put a rope or wire sling over the forks to aid hoisting.

Many plants make a removable, wooden platform to fit on the forks and provide steady footing for one or more workmen.

Here's a Quick Way To Test Twist in Singles Yarn

You can check the twist in a singles yarn on a conventional twist tester that has no special attachment for such testing.

Insert the yarn to be tested in the jaws of the tester and increase twist until the yarn breaks. Note the reading on the dial.

Insert a piece of the same yarn in the tester, remove the spinning twist, and continue turning the tester in the same direction until the yarn breaks. Note the second reading.

Let the first reading = A
Let the second reading = B

$$\text{Then } \frac{B - A}{2} = \text{singles twist}$$

Here is an example:

Adding twist to a Z-twist yarn causes the yarn to break at 10 tpi. Twisting in the opposite direction causes the yarn to break at 34 tpi.

$$\text{Singles twist} = \frac{34 - 10}{2}$$

$$= 12 \text{ tpi.}$$

Here is the theory behind the calculation:

Normal twist N divided by Reading A

= break twist in Z direction

Normal twist N minus reading B

= break twist in S direction

Since the break twists are equal and opposite, their sum is zero.

$$(N + A) + (N - B) = 0$$

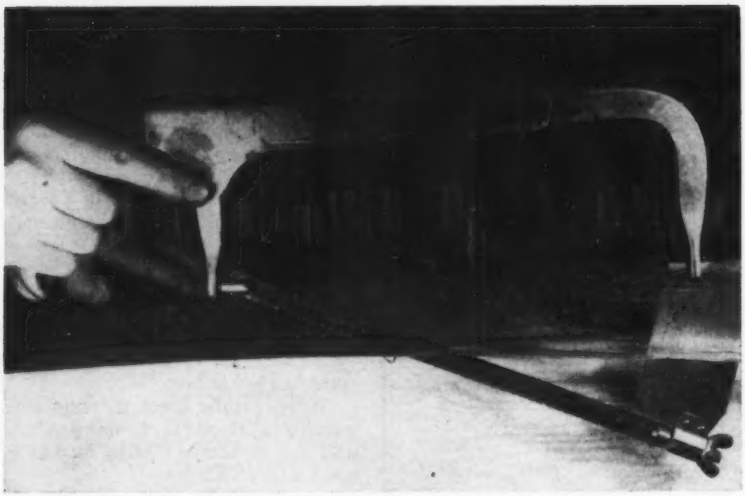
$$2N = B - A$$

$$N = \frac{B - A}{2}$$

Kinks and Short-Cuts

Kinks and Short-Cuts

How To Cut Sheet Metal With a Hack Saw



THE HACK-SAW-FRAME EXTENSION, which is the same thickness as the hack-saw blade, makes it possible to cut any width of sheet-metal strip desired.

It's impossible to cut large sheets of metal with an ordinary hack saw at any distance from the edge greater than the width of the hack saw when it's turned sideways because the end frame of the saw has to follow the blade through the cut.

We have converted a regular hack saw to a device to cut any size of sheet metal accurately.

A sheet of thin steel is fitted into the hack saw at the front end of the frame, opposite the handle. The thin steel forms an extension between the hack-saw blade and the frame. As the sheet metal is cut with the hack saw, the extension, instead of the saw frame, slides along through the cut metal.

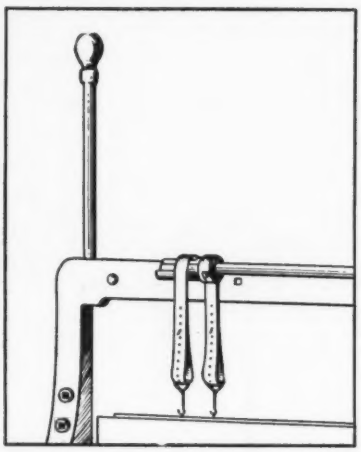
The extension is made from ground-stock steel and is of the approximate thickness of the width of cut made by a standard fine-tooth hack-saw blade for cutting sheet metal. It is fastened to the hack-saw frame by a piece of key steel. A section of the key steel is split lengthwise to hold the extension; then flush rivets are used to fasten the two pieces together.

The lower end of the extension is riveted to a loop made from flat steel. The loop holds the threaded blade-tensioning screw that's standard equipment on most hack saws.

When the device is assembled, it's used just as a regular hack saw is used, and a straight line marked on a sheet of metal can be followed easily. There is no limit to the size of metal sheets that can be cut.

The device works better when a slot underneath the metal is provided for the saw to project through. *Clifford T. Bower, London, England*

We Made Indicator Lights To Show Loom Warp Stops



SIGNAL LIGHT is fastened to the loom with a V-bolt and indicates warp stops only.

Our looms used to be stopped for a longer time than was necessary because our weavers could not detect the reason for loom stops immediately.

To correct this condition, we clamped a piece of electrical conduit to the arches of all our looms and fastened a socket to the top to hold a red-painted light bulb. We ran an electric wire from the socket to the electric stop motion of the loom. Now, when a warp end breaks, the fallen drop wire causes the light to come on and our weavers quickly know that a warp end is broken.

The advantages of the lights are that weave-room production is increased and better cloth is made because weavers pay more attention to stopped looms with warp ends out without worrying about other stopped looms that require more time for restarting. *Itzhak Zagiel, Boston, Mass.*

Match Shuttles Carefully To Prevent Bang-offs

We used to have a lot of bang-offs on our multishuttle looms without any apparent reason. Finally, we traced the bang-offs to faults in our shuttles such as uneven weights, mismatched size, and fine and coarse grains in the wood.

We stopped a lot of bang-offs by checking our shuttles three ways:

1. Shuttles, even though they are made by the same manufacturer, vary considerably in weight because of the varying density of the wood. Heavy shuttles have greater velocity than lighter ones; and when both types are run in the same room, considerable loom-fixing is required to keep the looms from banging off.

We now weigh all shuttles and make sets of shuttles of the same weight to be used together.

2. After shuttles are matched for weight, they are then checked on the backs for grain size. Fine-grain shuttles give less trouble than coarse-grain ones. Shuttles that have been matched for weight are again matched for grain.

3. Matched shuttles of the same weight and grain are then matched for size. Shuttles to be used in the same looms are held to a close tolerance in size.

Our supply-room clerk matches the shuttles, and the head loomfixer checks the sets of shuttles before they are placed in a loom. All new shuttles are selected this way before they are used. All the old shuttles running in our looms have also been matched the same way.

When we started this program, it involved a lot of work. But now we have a large supply of spare shuttles on hand, and the work doesn't require much time.

Time spent in selecting shuttles this way is not wasted but is a profitable investment. Our cloth production is higher than it has ever been. *M. P. Lazarides, Athens, Greece*

Kinks and Short-Cuts

This Guide Bar Keeps Belts — Fluid Drive for Beamer — Spring Holds Control Pin

Divide Yarn Bins For Small Lots

Our trouble was storage space for many small lots of yarn of different colors and yarn numbers. As the lots were not all the same size, we devised a yarn-storage bin flexible enough to cover all lot sizes.

The standard bin was split four ways and can rapidly be changed to accommodate one, two, three, or four divisions, according to the amount of yarn in stock.

Eight pieces of 1-in. angle iron were screwed into the bin to support dividing walls made from ½-in. plywood. The upright plywood divisions have four pieces of angle iron screwed to them to support horizontal plywood divisions.

When we have large lots of yarn, we simply remove the partitions. *Dan Singer, Newton, Mass.*

Use Both Whorl Motions To Equalize Wear on C-4's

Many of the styles of cloth we weave on C-4 looms require only two shuttles because we use only two colors of filling. On looms that have run only two shuttles for a few months, we always have a lot of trouble when we put on four-shuttle patterns again.

The reason for the trouble is that the whorl motion for the two top shuttle boxes wears because it is used constantly, while the back whorl, not in use, doesn't wear at all. It's hard to line up the shuttle boxes on a box motion with one whorl worn and one not worn.

We now have a plan that results in both whorl motions wearing the same amount. On two-shuttle patterns, we build the box chains to run on the front whorl motion for three months.

At the end of a three-month period, we rebuild the box chains to run on the back whorl for three months. By continuously altering the box chains, we end up with both whorl motions wearing the same.

Advantages are: (1) lower box-motion-parts costs because each whorl motion takes up half of the wear, and (2) better-quality cloth because shuttle boxes are more easily and accurately aligned.

The only disadvantage is that it's a little harder for a weaver to remove a shuttle from the third and fourth shuttle box at filling breaks than to remove one from the first and second box. *Bernard Dixon, Danville, Va.*

Best-Kink Award for February

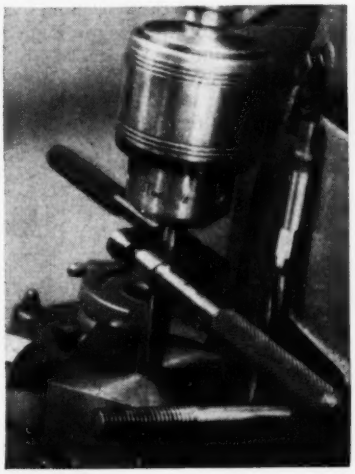
Each month TEXTILE WORLD awards $25 to the submitter of the Kink judged by a panel of over 200 practical mill men as the best for that particular month. A new batch of Kinks appears each month, and a new group of readers acts as judges each month.

If you are asked to judge one of these days, be sure to help select the best Kink by sending back your answer in time for final tabulation. Closing date for judging is the last day of the month in which the Kink appears.

The best Kink for February, according to TEXTILE WORLD reader-judges, was:

"This Dyehouse Uses a Portable Mixing Tank"

Ream Material in a Lathe With a Hand Reamer



A HAND REAMER is ground on the shank to hold a standard tap wrench. The reamer is fastened lightly in the tailstock drill chuck, the tap wrench is fastened to the reamer shank, and the hole is easily and safely bored in the material in the lathe chuck.

When a machine reamer with a Morse taper shank is not available for reaming work held in a lathe chuck, a hand reamer is commonly used for the job.

Most hand reamers have straight shanks with square-cut ends to fit a tap wrench. When a hand reamer is used in a lathe chuck, the tap wrench is usually fitted to the reamer shank to keep the reamer from turning. With this lathe setup, the tailstock center is pushed into the centering hole of the shank end of the reamer. The reamer is then pushed into the material it is to ream out by traversing the tailstock barrel.

While the operator is reaming a hole this way, he must pull back the reamer with one hand to be sure the hole in the shank is always touching the tailstock center. Failure to keep these two parts together may break the reamer.

We have also found an efficient way to use a hand reamer in a lathe when the reamer shank is small enough to fit into the tailstock drill chuck.

First, we grind the reamer shank near the ends of the flutes to form two flat surfaces at right angles to each other. Then we fasten the reamer shank in the tailstock drill chuck. The chuck is tightened just enough to support and guide the reamer.

A standard tap wrench is tightened to the ground surfaces of the reamer to keep the reamer from turning. The material to be reamed is fastened in the lathe chuck and is quickly reamed out without danger of breaking the reamer or to the operator. *Jack Smith, London, England*

How To Use Lipstick As a Knitting Aid

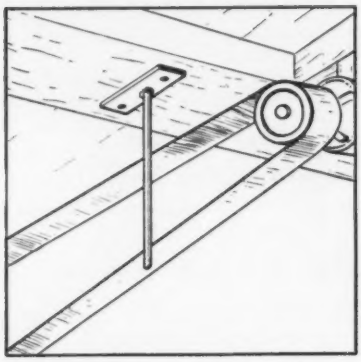
We improved our stitch-leveling procedure on our circular knitting machines by using lipstick instead of dirty grease smeared between the mechanic's finger and thumb.

Before leveling the stitch, we blow the lint from the yarn carriers because hardened lint in the yarn-carrier holes causes tight stitches. Light tension on the yarn above the stop motion removes slack from the yarn while we mark the yarn on a level with the bottom stop motion.

After the cylinders are turned by hand, the stitch cams are loosened on feeds that show a high red mark above the carrier eye. The stitch cams are raised on the feeds where the red mark is below the eye. We repeat this procedure until all red marks coincide at the eye.

When we get a heavy end of yarn, we mark the lipstick on the suspected end and put a label on the suspected cone. The machine is run for several revolutions, and the fabric examined. If we did not hit the heavy end, we count the courses from the heavy end to the marked course. *Leonard Mauer, Fort Meade, Md.*

This Guide Bar Keeps Belts On the Straight Path



THE GUIDE BAR stops the belt when the belt tries to jump off the driving pulley at full loads.

The overhead belts in our beaming department used to jump off the pulleys on full loads when the machines were started.

We stopped the belts from jumping off by fastening a guide bar on the ceiling 18 ins. from the driving pulley on the motor and on the opposite side of the belt from the motor.

The base for the guide bar is made from an 8-in. length of 2x¼-in. strap iron. Two ⅜-in. holes are drilled near the ends of the iron for lag screws. A ¾-in. cold-rolled steel rod 18 ins. long was welded to the center of the strap iron.

We screwed the strap-iron surface to a ceiling girder over the belt. The rod is ½ in. away from the belt when the belt is in running position. The bottom end of the rod is 2 ins. below the side of the belt on the bottom of the driving pulley, and the whole rod assembly is 18 ins. from the driving pulley.

When the belt is placed under a heavy load now, the edges of the belt strike the guide bar and the belt is held on the pulley until the load levels out and the belt regains its normal position.

The bar is easily made, and its cost is small. *Jesse G. Kennett, Greensboro, N. C.*

Old Hack-Saw Blades Clean Knitting-Machine Slots

By grinding off the broken teeth of old hack-saw blades, we converted these no-good items into useful knitters' accessories. Blades of various thicknesses are used to clean out and straighten sinker and cylinder needle slots of various cuts. We ground a point on the tip to aid in straightening slot walls. *Leonard Mauer, Fort Meade, Md.*

Fluid Drive for Beamer Eases Strain on Yarn

We used to have a lot of trouble with the clutch on our beaming machine because we couldn't keep it adjusted. The clutch was continually grabbing or slipping. We had a lot of shutdowns because we had to replace the worn-out clutch so frequently.

The old clutch started abruptly and broke a lot of beam ends. Beamer production was low.

We discarded the old clutch and added a hydraulic coupling. We removed control arms from the old clutch and bolted the new fluid-drive clutch plates together in their place.

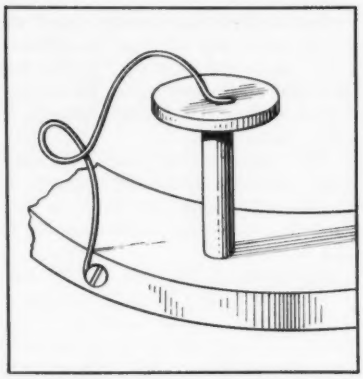
The machine is controlled by a hand switch. When the switch is turned on, the motor starts the fluid-drive coupling turning. The coupling builds up pressure as it revolves and, in turn, starts the gears and beam revolving.

To stabilize the shaft, we added a brace and bearing in the center.

The hydraulic coupling eases the strain on the motor because the motor has time to reach its peak torque before the load of the machine is put on it.

The new drive gives a gentle start that eases the strain on the yarn. Beamer production has been greatly increased. *Leslie Hayter, Huntingdon, Que.*

Spring Holds Control Pin On Rib-Knitting Machines



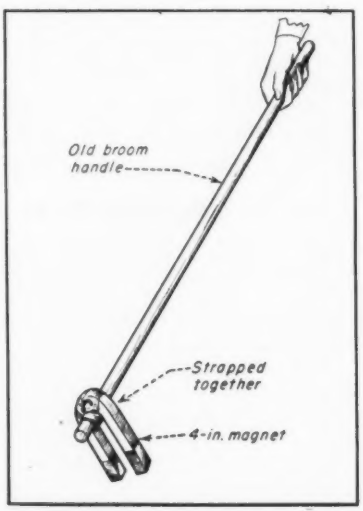
WIRE SPRING screwed to cylinder-head ring prevents the cam-control pin from rising too high to cause damage on rib-knitting machines.

When we speeded up our rib-knitting machines, the control pin that sits on the pattern chain and moves the cylinder cams sometimes jumped too high and moved the wrong lever.

To overcome this problem that caused bad work and smash-ups, we fixed a piece of spring wire to a screw on the cylinder-head ring. The wire was bent to press on the top of the control. When the high links on the chain push up the control pin, the spring prevents it from going too far.

Magnet Picks Up Drop Wires Spilled Under Looms

When we replace warps in our looms with drawn warps, we put in warps without drop wires. Then two girls work together to drop open-end drop wires on the warp ends. This method is much faster than having the drop wires placed on ends by drawing-in hands.



DROP WIRES JUMP from the floor to the magnet in bunches as the magnet is moved about underneath a loom.

But there is one objection to this method: the girls always let a lot of drop wires fall on the floor. When the girls finish drop-pinning a warp, they have to pick up the fallen drop wires. This job is tedious because the flat, thin wires stick to the floor.

We recently started using a magnet to pick up the fallen drop wires. A 4-in. magnet is strapped to a length of old broom handle at about a 45° angle.

A girl holds the end of the broom handle and reaches the magnet under the loom. Loose drop wires actually jump off the floor and attach themselves to the magnet. Drop wires can be picked up either singly or in bunches.

There are no disadvantages to this method of re-covering drop wires. The magnet is not strong enough to magnetize the drop wires and make them stick together later. *John W. Lewkowicz, Brockton, Mass.*

YARN DYED FABRICS...

the Royalty of Textiles

Yarn dyed fabrics like that shown here have always been the royalty of textiles. Formerly for the wealthy alone, they are now available to all—in a triumph of low-cost modern production.

As yarn merchants, handling many brands and qualities, Franklin Process can impartially supply you with the best colored yarns for your purpose. For prices and deliveries, get in touch with the nearest of our five strategically located plants.

Franklin Process

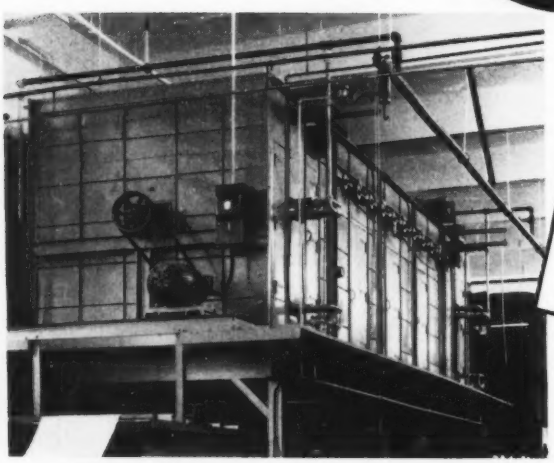
COTTON YARN MERCHANTS AND LARGEST PACKAGE DYERS IN THE WORLD

New York
Representatives
40 Worth Street

Providence
Philadelphia
Greenville
Chattanooga
Fingerville, S. C.

18th Century French Brocade, about 1740.
Museum of Art, R. I. School of Design.

See A & G DRYING AND VENTILATING EQUIPMENT at American Textile Machinery Exhibition



VAPOR DRYER: We are showing a gas fired unit of our well known roll type dryer with all of the latest improvements.

ROOF FAN: We are showing one of our ventilating units that can be mounted on the roof and throw the heat and vapor up and away from supply inlets.

The Choice of Leading Mills

The two A & G units illustrated herewith will be shown at the American Textile Machinery Exhibition at Atlantic City, April 26 through 30 — booth 78 on the main floor and booths 840-842 and 849-851 on the second floor.

This equipment has consistently been the choice of leading mills because it is tried and proven. It has been continuously developed and perfected over a long period of years.

Be sure to visit us and learn about the important features of this and other A & G equipment.

ANDREWS and GOODRICH, Inc.
336 Adams Street
Boston (Dorchester), Mass.

Southern Representatives
McSpadden and Scantland, Charlotte, N. C.

TEXTILE WORLD'S

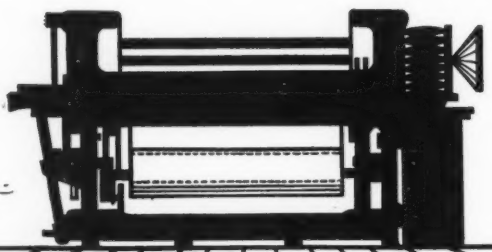
Guide to Exhibitors

Come to Atlantic City

ARCHLESS LOOMS

ENCLOSED GEARING

NEW TAKE UPS and LET OFFS



ANTI-FRICTION BEARINGS

NEW DRIVE

You'll find the facts in Atlantic City– April 26-30

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954

"Retaining Leadership through Research"

DRAPER CORPORATION

HOPEDALE, MASS.

ATLANTA, GA. GREENSBORO, N.C. SPARTANBURG, S.C.

THE WORLD'S LARGEST MANUFACTURER OF AUTOMATIC LOOMS

American Textile Machinery Exhibition

American Textile Machinery Exhibition

VISITORS TO THE American Textile Machinery Exhibition at Atlantic City, N. J., during the week of April 26 to 30 will find about $10-million worth of machinery, equipment, and supplies on display.

Textile machinery manufacturers have spent many hours since the last show developing new machines and improving others. Several companies are showing new machines for the first time, and others will feature recent improvements that have been made in their equipment.

TEXTILE WORLD will be located in Booth No. 357aaD. We extend a cordial invitation to all visitors to the show to stop at our booth. While at the booth, pick up a copy of our Guide to Exhibitors and one of our handy literature folders.

VISITING HOURS AT THE SHOW

Monday	10 a.m. to 6 p.m.
Tuesday	10 a.m. to 6 p.m.
Wednesday	10 a.m. to 10 p.m.
Thursday	10 a.m. to 6 p.m.
Friday	10 a.m. to 6 p.m.

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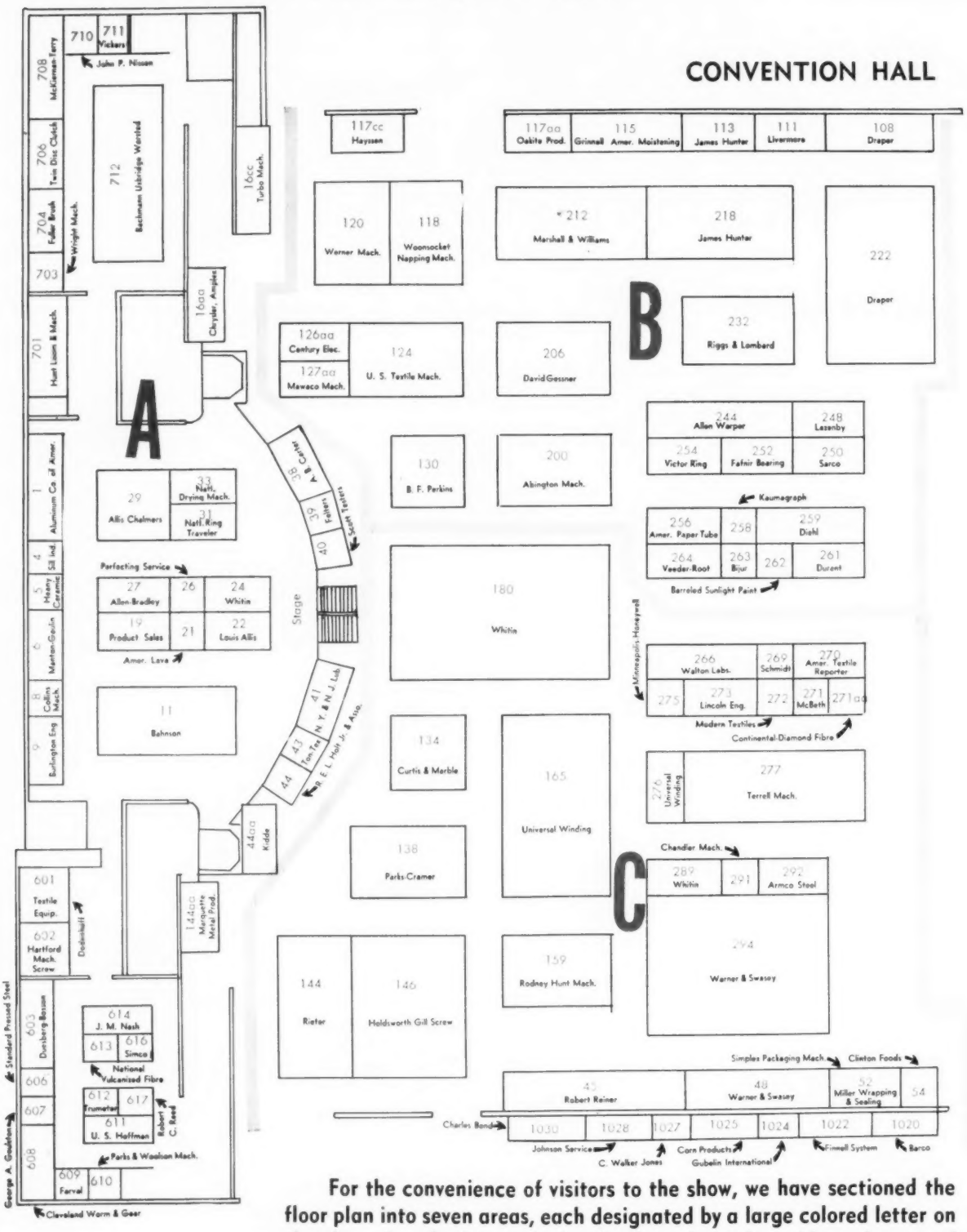
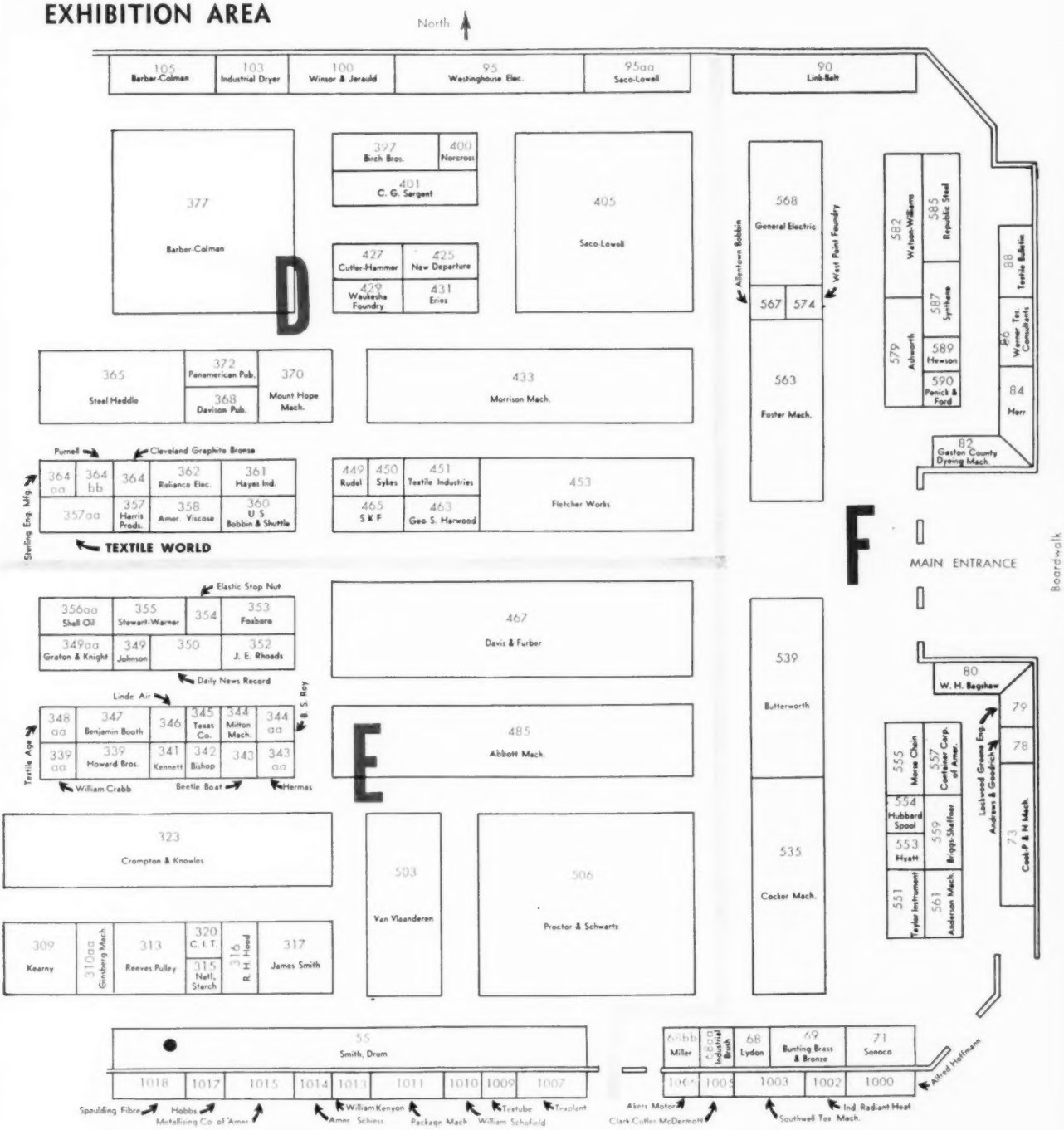
American Textile Machinery Exhibition



For the convenience of visitors to the show, we have sectioned the floor plan into seven areas, each designated by a large colored letter on the plan. In referring to the booths throughout the guide we have used the booth number followed by the area letter in which the booth is located.

EXHIBITION AREA

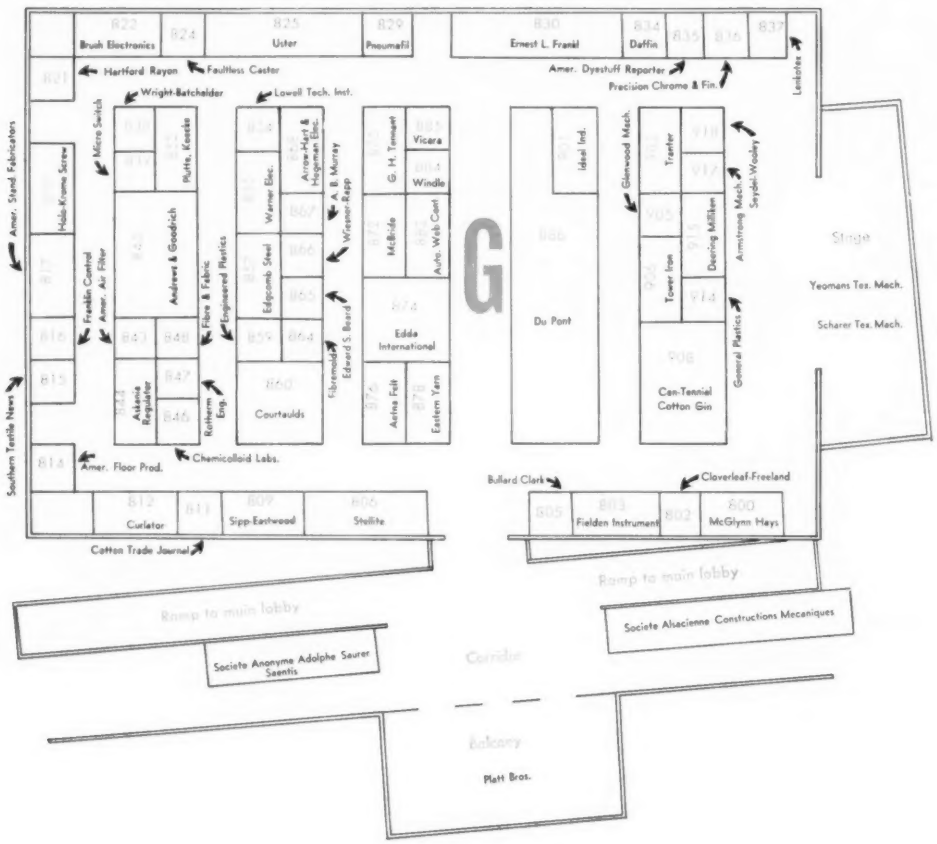


For example TEXTILE WORLD, whose booth number is 357aa, located in area D, is listed in the Guide as 357aaD.

We hope that you will find this floor plan convenient to use and that through its use you will be able to find your way around the show more easily.

American Textile Machinery Exhibition

SECOND FLOOR EXHIBITION HALL



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Daffin Mfg. Co.	Humidifiers	834G
Johnson Service Co.	Humidifier controls	1028C
Parks-Cramer Co.	Humidifying equipment	138C
Walton Laboratories, Inc.	Humidifying equipment	266C

2. Building Construction and Maintenance, Paints, Tools, Yard Equipment, Water Supply

EXHIBITOR	PRODUCT	BOOTH NO.
Barreled Sunlight Paint Co.	Paint products	262B
Finnell System, Inc.	Floor-maintenance equipment and supplies	1022C
Grinnell Co., Inc.	Unit heaters	115B
Metallizing Co. of America	Metallizing and welding equipment	1015E
G. H. Tennant Co.	Floor-maintenance equipment and supplies	870G

3. Chemicals, Dyestuffs, Fiber and Yarns

EXHIBITOR	PRODUCT	BOOTH NO.
American Viscose Corp.	Rayon fiber	358D
Chemicolloid Laboratories	Colloid mill	846G
Courtaulds, Inc.	Solution-dyed rayon	860G
E. I. du Pont de Nemours & Co., Inc., Textile Fibers Dept.	Fibers	886G
Eastern Yarn Mills	Yarns	878G
Hartford Rayon Co., Div. of Bigelow-Sanford Carpet Co., Inc.	Rayon fiber	821G
Seydel-Woolley & Co.	Sizes, finishes, conditioners	918G
Virginia-Carolina Chemical Corp., Fiber Div.	Fiber	885G

4. Cleaning Equipment and Supplies, Fire-Protection Equipment

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Finnell System, Inc.	Floor-cleaning equipment and supplies	1022C

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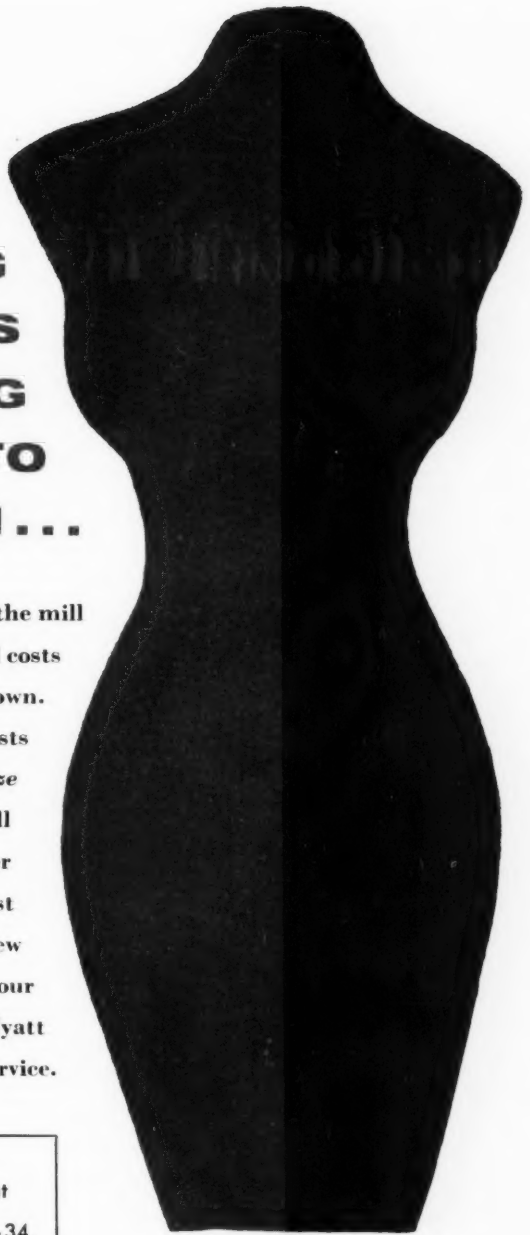
WHEN EVERYTHING GOES ACCORDING TO FORM . . .



Who worries about bearings when the mill is running smoothly? Production is up and costs are down. But then comes the breakdown. Equipment fails, production falters, and costs go soaring. *And that's when you realize you should have insisted on Hyatts!* For in all types of textile machinery, Hyatt Roller Bearings are your best insurance against costly down time. Before you buy new equipment or make change-overs, write for our *new Textile Bulletin*. Or contact a Hyatt sales-engineer. He's always at your service.

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954

See the Hyatt Display at the A.T.M.A.E. Booth 533-34, Atlantic City, April 26-30.

HYATT

STRAIGHT ○ BARREL ○ TAPER ○

HYATT BEARINGS DIVISION • GENERAL MOTORS CORPORATION • HARRISON, NEW JERSEY

ROLLER BEARINGS

Index of Exhibitors by Products (Continued)

4. Cleaning Equipment and Supplies, Fire-Protection Equipment (Continued)

EXHIBITOR	PRODUCT	BOOTH NO.
The Fuller Brush Co.	Brushes	704A
Industrial Brush Co.	Brushes	68aaF
Linde Air Products Co., Div of Union Carbide & Carbon Corp.	Polishing powder	346E
Oakite Products, Inc.	Cleaning equipment and supplies	117aaB
Parks-Cramer Co.	Traveling cleaners	138C
G. H. Tennant Co.	Floor-cleaning equipment and supplies	870G

5. Dyeing, Finishing, and Cloth-Room Equipment and Supplies

Aetna Felt Co.	Felts, decating blankets, creel washer	876G
American Standard Fabricators, Inc.	Extracting and drying machines	817G
Andrews & Goodrich, Inc.	Dryers	78F, 840G
Askania Regulator Co.	Cloth guide	844G
Automatic Web Control Mfg. Co.	Guiding equipment	882G
Edward S. Beard	Cloth-handling machines	865G
Birch Bros., Inc.	Dyeing and finishing machinery, sewing machines	397D
Burlington Engineering Co.	Dyeing machines	9A
H. W. Butterworth & Sons Co.	Dyeing, printing, and finishing machinery	539F
Chandler Machine Co.	Pleating, pinking, and cutting machines	291C
Cook-P&N Machine Co., Inc.	Dyeing and finishing machinery	73F
Curtis & Marble Machine Co.	Cloth-room equipment	134C
Fletcher Works, Inc.	Extractors	453D
Gaston County Dyeing Machine Co.	Dyeing machines and parts	82F
David Gessner Co.	Napping and cloth-finishing machinery	206B
Ginsberg Machine Co., Inc.	Cloth-room equipment	310aaE
Hermas Machine Co.	Dyeing and cloth-room equipment	343aaE
Hobbs Mfg. Co.	Fabric winder	1017E
Alfred Hofmann Needle Works, Inc.	Dyeing machinery	1000F
Rodney Hunt Machine Co.	Dyeing and finishing machines	159C
James Hunter Machine Co.	Finishing machinery	113B, 218B
Industrial Radiant Heat Corp.	Radiant-heat dryers	1002F
Edward J. McBride	Finishing machine	872G
McKiernan-Terry Corp.	Calender and calender rolls	708A
Marshall & Williams Corp.	Finishing machinery and parts	212B
Mawaco Machine Co., Inc.	Decating and coating machines	127aaB
Morrison Machine Co.	Finishing machinery	433D
Mount Hope Machinery Co.	Finishing equipment	370D
The National Drying Machinery Co.	Dryers	33A
Parks & Woolson Machine Co.	Napping machine	610A
B. F. Perkins & Son, Inc.	Calender machines and rolls	130B
Proctor & Schwartz, Inc.	Finishing equipment	506E
Robert Reiner, Inc.	Pleating machine	45C
Riggs & Lombard, Inc.	Washer	232B
Sill Industries	Heating units	4A
Smith, Drum & Co.	Dyeing, drying, and extracting equipment	55E
Tower Iron Works	Dyeing and finishing machinery	906G
U. S. Hoffman Machinery Corp.	Cloth-pressing machines	611A
Van Vlaanderen Machine Co.	Dyeing, finishing, and cloth-room machinery	503E
Werner Machine Co., Inc.	Dyeing, finishing, and cloth-room equipment	120B
West Point Foundry & Machine Co.	Brushers	574F
The Wiesner-Rapp Co., Inc.	Drying and finishing machinery	866G
Winsor & Jerauld Mfg. Co.	Tenter frame and accessories	100D
Woonsocket Napping Machinery Co.	Finishing machinery	118B

6. Electrical Equipment—Motors, Controls, Lighting, Etc.

Allen-Bradley Co.	Controls	27A
Allis-Chalmers Mfg. Co.	Motors	29A
The Louis Allis Co.	Motors	22A
The Arrow-Hart & Hegeman Electric Co.	Motor controls	868G
Century Electric Co.	Motors and controls	126aaB
Cutler-Hammer, Inc.	Starters and switches	427D
Diehl Mfg. Co.	Motors and fans	259B
General Electric Co. Apparatus Div., Textile Industry Sec.	Motors and controls	568F
The Hewson Co.	Static eliminators	589F
Micro-Switch, Div. of Minneapolis-Honeywell Regulator Co.	Switches	839G
The Miller Co.	Lighting	68bbF
Reliance Electric & Engineering Co.	Motors	362D
The Simco Co.	Static eliminators	616A
Westinghouse Electric Corp.	Electrical equipment	95D

7. Fluid Handling—Compressors, Pumps, Piping, Valves, Fittings, Unions, Joints

Armstrong Machine Works	Steam trap	917G
Barco Mfg. Co.	Joints	1020C
The Johnson Corp.	Joints	349E
Minneapolis-Honeywell Regulator Co.	Measurement and control meters	275C
Perfecting Service Co.	Rotary unions	26A
Rotherm Engineering Co., Inc.	Joints	847G
Sarco Co., Inc.	Traps	250B
Vickers, Inc.	Pumps	711A
Waukesha Foundry Co.	Pumps	429D

8. Instruments—Measuring, Metering, Weighing Apparatus

Anderson Machine Shop, Inc.	Testers	561F
Askania Regulator Co.	Measuring and control devices	844G
Brush Electronics Co.	Testers	822G
Durant Mfg. Co.	Counters	261B
Fielden Instrument Div., Robertshaw-Fulton Controls Co.	Control instruments	803G
Foxboro Co.	Control instruments	353E
The Hewson Co., Inc.	Testers	589F
Macbeth Corp.	Control lighting instruments	271C
Minneapolis-Honeywell Regulator Co.	Measurement and control meters	275C
Norcross Corp.	Recording and controlling instruments	400D
Scott Testers, Inc.	Testers	40A
Stellite American Corp.	Fiber-length tester	806G
Stellite, Milano	Fiber-length tester	806G
Taylor Instrument Cos.	Measurement and control instruments	551F
Trumeter Co.	Counting and measuring devices	612A
Uster Corp.	Testers	825G
Veeder-Root, Inc.	Counters	264B
Wright Machinery Co.	Nep-potential meter	703A

9. Knitting-Mill Equipment and Supplies

Proctor & Schwartz, Inc.	Preboarding machine	506E
Synthane Corp.	Hosiery examining forms	587F
Turbo Machine Co.	Hosiery-finishing machines	16ccA

10. Lubricants and Lubrication Equipment

Alemite Div., Stewart-Warner Corp.	Lubrication equipment	355E
Bijur Lubricating Corp.	Central-lubricating system	263B
The Farval Corp.	Central-lubricating systems	609A
George A. Goulston Co.	Fiber lubricants	607A
Lincoln Engineering Co.	Central-lubrication systems	273C
New York & New Jersey Lubricant Co.	Lubricants	41A
Shell Oil Co.	Lubricants	356aaE
The Texas Co.	Lubricants	345E

11. Management Services—Factors, Consulting Engineers, Manufacturers Representatives, Publications, Schools

Akers Motor Lines, Inc.	Motor transportation	1006F
America's Textile Reporter	Textile publication	270C
American Dyestuff Reporter	Textile publication	835G
C.I.T. Corp.	Finance service	320E
The Cotton Trade Journal	Textile publication	811G
Daily News Record	Textile publication	350E
Davison Publishing Co.	Textile publication	368B
Fibre & Fabric	Textile publication	848G
Ernest L. Franki Associates	Manufacturers' representatives	830G
Lockwood Greene Engineers, Inc.	Engineers	79F
Lowell Technological Institute	Textile school	854G
Modern Textiles Magazine	Textile publication	272C
Panamerican Publishing Co.	Textile publication	372D
The Purnell Co.	Catalogs	364bbD
Southern Textile News	Textile publication	815G
Textile Age	Textile publication	348aaE
Textile Bulletin	Textile publication	88F
Textile Industries	Textile publication	451D
TEXTILE WORLD	Textile publication	357aaD
Werner Textile Consultants	Textile engineers	86F

12. Materials for Machinery and Equipment

Aluminum Co. of America	Aluminum mill products	1A
Amplex Div., Chrysler Corp.	Bearings	16aaA
Armco Steel Corp.	Stainless and aluminized steels	292C
Clark-Cutler-McDermott Co.	Vibration pads	1000F
Continental-Diamond Fibre Co.	Loom parts, gears	271aaC
Edgcomb Steel Co.	Stainless steel	857G
Elastic Stop Nut Corp. of America	Fasteners	354E
The Felters Co.	Vibration pads	39A
General Plastics Corp.	Plastic-coated equipment	914G
Harris Products Co.	Rubber	357D
The Holo-Krome Screw Co.	Socket-screw products	819G
C. Walker Jones	Rubber rolls	1027C
A. B. Murray Co., Inc.	Stainless and carbon steel	867G
Precision Chrome & Finishing Corp.	Chrome plating	836G
Republic Steel Corp.	Stainless steels	585F
Tranter Mfg. Co., Platecoil Div.	Heat transfer units	903G

13. Materials Handling, Packaging, and Shipping Facilities

Beetle Boat Co.	Trucks and Boxes	343E
Container Corp. of America	Shipping and display cartons	557F
Continental-Diamond Fibre Co.	Trucks and boxes	271aaC
Faultless Caster Corp.	Casters	824G
Fibremold, Inc.	Molded boxes, trays, etc.	864G
Fibre Specialty Div., National Vulcanized Fibre Co., Inc.	Trucks, boxes, trays, roving cans, barrels	613A

(Continued on page 146)

Index of Exhibitors by Products (Continued)

Wrapped to WIN SALES by MACHINES THAT CUT COSTS

MODEL FB — one of the latest models among our group of textile wrapping machines

To obtain the most attractive and practical package, you need a machine that is ideally suited to the character of your product. And for lowest operating cost, this machine should have the speed and flexibility to fit in with your production set-up... So that you may obtain these advantages, "Package" engineers have developed *not one* machine, but a group of modern machines, all of which are *especially designed* for textile wrapping. From this group we can supply you with a machine specifically adapted to your needs... So for a sales-producing package and lower wrapping costs, be sure to check with a "Package" representative.

PACKAGE MACHINERY COMPANY • Springfield, Massachusetts

NEW YORK PHILADELPHIA BOSTON CLEVELAND CHICAGO ATLANTA DALLAS DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

PACKAGE MACHINERY COMPANY

SEE OUR EXHIBIT AT THE AMERICAN TEXTILE MACHINERY SHOW Atlantic City Auditorium, Apr. 26-30, Booths 1011-1012

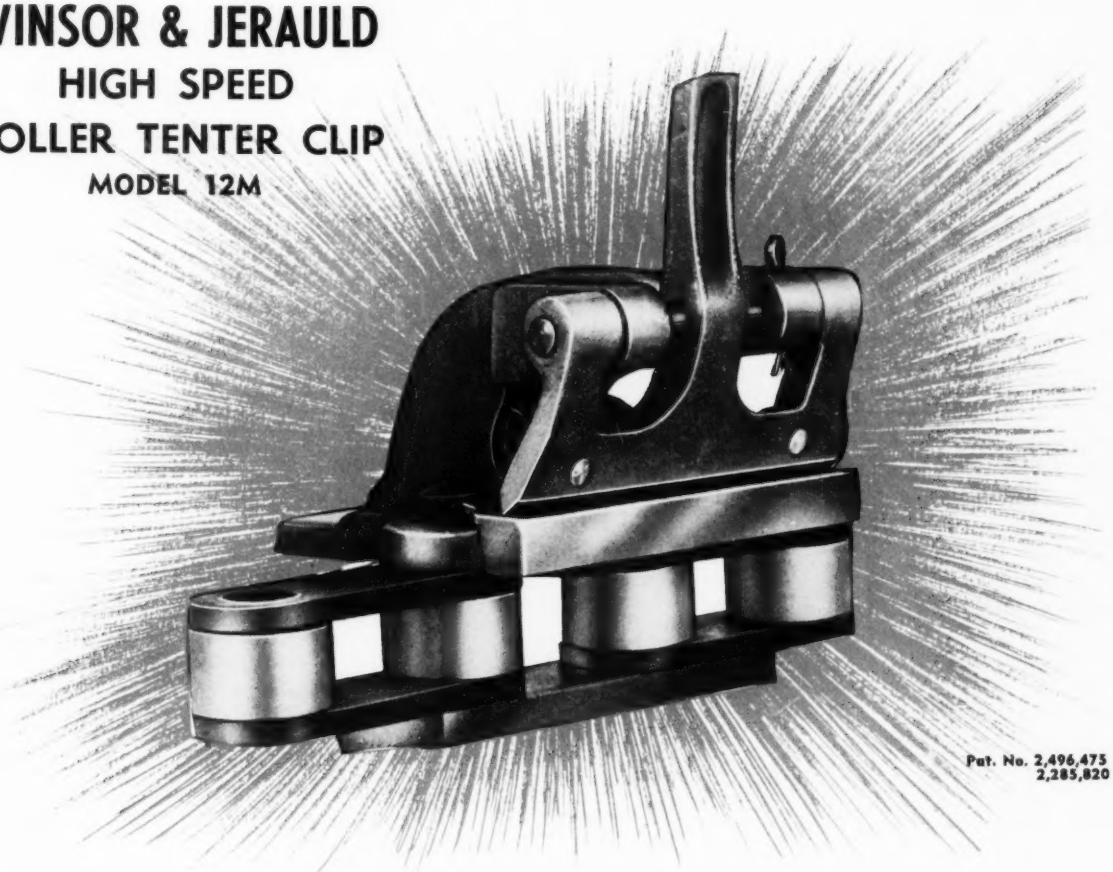
WINSOR & JERAULD

Index of Exhibitors by Products (Continued)

EXHIBITOR	PRODUCT	BOOTH NO.
13. Materials Handling, Packaging, and Shipping Facilities (continued)		
Ginsberg Machine Co., Inc.	Label sealer	316aaE
Hayssen Mfg. Co.	Wrapping machine	117ccB
Kaumagraph Co.	Marking equipment	258B
Kennett Equipment & Machinery Co.	Materials-handling equipment	341E
Miller Wrapping & Sealing Machine Co.	Labeling and sealing equipment	52C
John P. Nissen, Jr., Co.	Marking supplies	710A
Package Machinery Co.	Wrapping machine	1011E
Simplex Packaging Machinery, Inc.	Packaging machine	52C
Sterling Engineering & Manufacturing Co.	Trucks; bobbin, quill, cone boards	364aaD
Warner Machine Co.	Sealers	120B
W. W. Windle	Bagger	884G
Wright-Batcheldor Corp.	Casters	838G
14. Power Generation and Transmission		
Allis-Chalmers Mfg. Co.	Drives	29A
The Louis Allis Co.	Drives	22A
Charles Bond Co.	Leather belting	1030C
The Bunting Brass & Bronze Co.	Bearings	69F
The Cleveland Graphite Bronze Co.	Bearings	364D
The Cleveland Worm & Gear Co.	Power transmission equipment	608A
Diehl Mfg. Co.	Power transmitters	259B
The Fafnir Bearing Co.	Bearings	252B
Franklin Control Corp.	Drives and controls	816G
Gubelin International Corp.	Sheaves and pulleys	1024C
Hyatt Bearings Div., General Motors Corp.	Bearings	553E
Link-Belt Co.	Power transmission and conveying equipment	90F
Morse Chain Co., a Borg Warner Industry	Clutches	55F
New Departure Div., General Motors Corp.	Bearings	425D
Reeves Pulley Co.	Drives and controls	313E
Reliance Electric & Engineering Co.	Drives	362D
J. E. Rhoads & Sons	Belting	352E
Ton-Tex Corp.	Belting	43A
Vickers, Inc.	Motors and transmissions	711A
Warner Electric Brake & Clutch Co.	Clutches and brakes	855G
15. Weaving and Warp-Preparation Equipment and Supplies		
Abington Textile Machine Works	Weaver's knotter	206B
Allen Warper Co.	Warpers	244B
Bachmann Uxbridge Worsted Corp.	Slasher equipment	712A
Barber-Colman Co.	Spooler, warper, warp tying-in and drawing-in machines	105D, 377D
Charles Bond Co.	Leather supplies	1030C
Briggs-Shaffner Co.	Beams	559F
The Bullard Clark Co.	Loom supplies	805G
A. B. Carter, Inc.	Weaver's knotter	38A
Clinton Foods, Inc.	Corn products	54C
Cocker Machine & Foundry Co.	Warpers and slashers	535F
Corn Products Sales Co.	Corn products	1025C
Crompton & Knowles Loom Works	Weaving equipment	323E
Draper Corp.	Weaving equipment	108B, 222B
Edda International Corp.	Warp-tying machine, reed grinding and brushing machine	874G
Fletcher Works, Inc.	Narrow-fabric looms	453D
Graton & Knight	Textile leathers	349aaE
R. E. L. Holt, Jr., and Associates	Weaving supplies	44A
Hubbard Spool Co.	Beams	554F
Hunt Loom & Machine Works, Inc.	Weaving equipment	701A
H. F. Livermore Corp.	Loom parts	111B
Edward J. McBride	Warper creels	872G
Manton-Gaulin Mfg. Co., Inc.	Homogenizers	5A
Mawaco Machine Co., Inc.	Loom accessories	127aaB
Milton Machine Works	Beams	344E
National Starch Products, Inc.	Starches	315E
Penick & Ford Ltd., Inc.	Corn products	590F
Robert Reiner, Inc.	Beaming machine	45C
J. E. Rhoads & Sons	Leather products	352E
Saentis, Inc.	Looms	Corridor G
Schmidt Mfg. Co.	Weaving accessories	269C
Sipp-Eastwood Corp.	Warper	509G
Société Anonyme Adolphe Saurer	Weaving equipment	Corridor G
Standard Pressed Steel Co.	Shuttle parts	606A
Steel Heddle Mfg. Co.	Heddles, harness frames, reeds, etc.	365D
The Terrell Machine Co.	Loom supplies	277C
Ton-Tex Corp.	Loom and harness strapping	43A
Twin Disc Clutch Co.	Loom accessories	706A
U S Bobbin & Shuttle Co	Beams, shuttles	360D
Uster Corp.	Warp-tying machines	825G
The Warner & Swasey Co.	Weaving machine	294C, 48C
Watson-Williams Mfg. Co.	Shuttles and shuttle parts	582F
West Point Foundry & Machine Co.	Slashers	574F

EXHIBITOR	PRODUCT	BOOTH NO.
16. Yarn-Production, Winding, and Twisting Equipment, and Supplies		
Abington Textile Machine Works	Card-stripping equipment	206B
Abbott Machine Co.	Winding machinery and equipment	485E
The Allentown Bobbin Works, Inc.	Bobbins and spools	567F
American Lava Corp.	Thread guides	21A
American Paper Tube Co.	Yarn carriers	256B
American Rieter Co.	Spinning machinery and accessories	144C
Anderson Machine Shop, Inc.	Staple cutter	561F
Ashworth Bros., Inc.	Card clothing	579F
W. H. Bagshaw Co., Inc.	Lags and pins	80F
Benjamin Booth Co.	Card clothing	347E
A. B. Carter, Inc.	Ring travelers	38A
Cen-Tennial Cotton Gin Co.	Opening equipment	908G
Cloverleaf-Freeland Corp.	Bobbins	802G
Collins Bros. Machine Co.	Twister	8A
William Crabb & Co.	Pins and lag sections	339aaE
Curlator Corp.	Nonwoven-fabric machinery	812G
Davis & Furber Machine Co.	Preparation machinery and supplies	467E
Deering, Milliken Research Trust	Twisting machine	915G
W. D. Dodenhoff Co., Inc.	Blending and tinting machinery	601A
Engineered Plastics, Inc.	Bobbins	859G
Eriez Mfg. Co.	Magnets	431D
Faultless Caster Corp.	Top rolls	824G
Fletcher Works, Inc.	Throwing machinery	453D
Foster Machine Co.	Winding machine	563F
Glenwood Machinery Associates, Inc.	Bobbin-refinishing machine	905G
Graton & Knight Co.	Textile leathers	349aaE
Gubelin International Corp.	Spindles	1024C
Hartford Machine Screw Co.	Spindles	602A
George S. Harwood & Son	Bramwell feeder	483D
Hayes Industries, Inc.	Beams and bobbins	361D
Heany Industrial Ceramic Corp.	Guides	5A
Herr Mfg. Co., Inc.	Rings and flyers	84F
Holdsworth Gill Screw Co., Inc.	Top-breaking and gilling machinery	146C
R. E. L. Holt Jr., & Associates, Inc.	Guides and bobbins	44A
R. H. Hood Co.	Gilling combs and aprons	316E
Howard Bros. Mfg. Co.	Card, napper, brush clothing	339E
Hubbard Spool Co.	Bobbins	554F
Ideal Industries, Inc.	Drawing frame	901G
Kearny Mfg.Co.	Winders and yarn conditioning machines	309E
The Industrial Dryer Corp.	Yarn conditioner	103D
William Kenyon & Sons (America) Ltd.	Tapes	1013E
Walter Kidde & Co., Inc.	Tension compensators	44aaA
The F. A. Lazenby Co.	Winding equipment	248B
Linde Air Products Co., Div. of Union Carbide & Carbon Corp.	Guides	346E
Lydon Bros., Inc.	Twist setter	68F
McGlynn Hays Industries, Inc.	Frames	800G
The Marquette Metal Products Co.	Spindles	144aaA
J. M. Nash Co.	Quill polisher, bobbin washer	614A
National Ring Traveler Co.	Ring travelers	31A
New Departure Div., General Motors Corp.	Spindle and tension-pulley bearings	425D
Platt Bros. Sales Ltd.	Frames and blenders	Balcony G
Plutte, Koecke & Co.	Winder	852G
Pneumafil Corp.	Frame-waste-handling systems	829G
Proctor & Schwartz, Inc.	Synthetic card	506E
Product Sales, Inc.	Top rolls, saddles, and weight tester	19A
Robert C. Reed Co.	Lags, slats, and pins	617A
Joh. Jacob Rieter & Co. Ltd.	Spinning machinery and accessories	144C
B. S. Roy & Son Co.	Card-grinding equipment	344aaE
SKF Industries, Inc.	Top-roll and tension-pulley bearing, pendulum weighting arm	465D
Saco-Lowell Shops	Preparatory machinery	95aaD, 405D
C. G. Sargent's Sons Corp.	Preparatory equipment	401D
Schrarer Textile Machine Works	Winding machinery and equipment	Stage G
William Schofield Co.	Slats	1010E
Seydel-Woolley & Co.	Twist setter	918G
James Smith & Son, Inc.	Noble-combing equipment	317E
Société Alsaciene de Constructions Mecaniques	Spinning frames	Corridor G
Sonoco Products Co.	Cones, tubes, cores, spools, cots, and bobbins	71F
Southwell Textile Machinery Research Corp.	Preparation equipment	1003F
Spaulding Fibre Co., Inc.	Bobbins, tubes, and parts	1018E
Stellite American Corp.	Combing and spinning machinery	806G
Stellite, Milano	Combing and spinning machinery	806G
Sykes, Inc.	Card clothing	450D
Synthane Corp.	Bobbins and Caps	587F
The Terrell Machine Co.	Bobbin stripper	277C
Texplant Corp.	Spindles and rings	1007E
Textube Corp.	Tubes, quills, and bobbins	1009E
Textile Equipment Corp.	Blending and tinting machinery	601A
Turbo Machine Co.	Fiber crimper and setting machines	16ccA
U S Bobbin & Shuttle Co.	Bobbins, spools	360D
U. S. Textile Machine Co.	Winding machinery	124B
Universal Winding Co.	Winding and twisting machinery	165C, 276C
Victor Ring Traveler Co.	Ring travelers	254B
The Warner & Swasey Co.	Pin drafter & Pacific converter	294C, 48C
Whitin Machine Works	Preparation machinery and parts	24A, 180C, 289C
Yeomans Textile Machinery Co.	Winding equipment	Stage G

WINSOR & JERAULD
HIGH SPEED
ROLLER TENTER CLIP
MODEL 12M



Pat. No. 2,496,473
2,285,820

The model #12M Roller Type Automatic Tenter Clip has been designed and developed to lift the speed limitation and increase the cloth control in the operations of high speed tenter chains.

Essentially, the clip consists of a malleable iron main body, bronze jaw, and a full 2" pitch roller chain.

Particular attention is called to the fact that the bottom is a true roller chain with all parts made of oil-hardened alloy steel providing low friction operation and smooth operation at the sprockets. A patented interlocking feature on the bottom plate prevents the weaving action found in conventional roller chain.

The top is a duplicate of the famous Winsor and Jerauld #7 tenter clip, which has proven its superiority over the years. As with the Winsor and Jerauld #7 tenter clip, any type of controller can be furnished in addition to our new high speed "slow drop" controller. The entire top can quickly be removed by means of two screws and another substituted, or a pin plate be used.

Our staff is at your service without obligation and in addition, our Southern Division is fully equipped to check and repair tenter chains of all types. We look forward to serving you from our main plant in Providence, or from Charlotte.

SEE US AT ATLANTIC CITY
BOOTHS 100-101-102

Experts in Cloth Finishing Machinery

Winsor & Jerauld
MANUFACTURING COMPANY, INC.

Main Office
1268 Eddy Street
Providence 5, R. I.

Southern Division
518 Atlande Avenue
Charlotte, No. Carolina

Who and What at the Show

ABBOTT MACHINE CO., INC. (485E)
Wilton, N. H.

Features an automatic traveling-spindle cone winder; an automatic traveling-spindle quiller with a boxing attachment; an automatic radial quiller with a pinboard attachment; and an automatic radial quiller with a measured yardage device.

Representatives at booth:
S. A. Roane — A. P. Apple
E. W. Skinner — S. L. Abbott
L. V. Shalmers — W. G. Abbott
L. S. Ligon, Jr. — J. E. Ring
F. L. Hendricks — L. S. Ligon
W. E. Brumley

ABINGTON TEXTILE MACHINERY WORKS (200B)
200 Wales St., North Abington, Mass.

Features automatic vacuum card-stripping equipment; automatic comber-noil pick-up attachments on a comber; weaver's knotters; a wool-card vacuum-stripping motion with a tip-up nozzle; an automatic continuous-web and sliver device for cards; a wool card tip-up nozzle.

Representatives at booth:
S. Smith
E. Clark — J. W. Burbine
S. Smith, Jr. — O. H. Ramo
W. W. Watt — W. W. Brame
F. J. Richardson — M. R. Bradley

AETNA FELT CO., INC. (876G)
204 Centre St., New York 13, N. Y.

Features decating cloths, including a new decating blanket, woven and pressed felts, vibration felt pads, and a new type of creel washer.

Representatives at booth:
W. P. Musselman — C. Outcault
D. Vlaun — F. Hickey
C. T. Keppler

AKERS MOTOR LINES, INC. (1006F)
Gastonia, N. C.

Features motor transportation and its relationship to the textile market.

Representatives at booth:
C. S. Akers — A. J. Hinton
C. W. Akers — W. H. Harris
G. R. Fillion — A. W. Levi
J. W. Dear, Jr.

ALLEN-BRADLEY CO. (27A)
136 W. Greenfield Ave., Milwaukee, Wis.

Features electric motor controls, including push buttons, voltage starters, limit switches, and timers.

Representatives at booth:
C. M. McCoombe
C. B. Pickering — H. Rosenkranz

ALLEN WARPER CO. (244B)
40 Church St., Lowell, Mass.

Features a high-speed warper for cotton, rayon, and synthetic yarns. A new high-speed heavy-duty beamer, the Model C warper, a creel, and an assortment of beams will also be shown.

Representatives at booth:
W. L. Peterson — W. Tinsley
H. Barney — A. Hawkins
D. Laffey — J. Bowler
J. E. Jones — H. C. Nelson

THE ALLENTOWN BOBBIN WORKS, INC. (567F)
417-431 N. 14th St., Allentown, Pa.

Features bobbins and spools for the processing of fine-denier yarns.

Representatives at booth:
H. W. Mack — H. S. Barnes

ALLIS-CHALMERS MFG. CO. (29A)
Box 512, Milwaukee, Wis.

Features Texrope drives, new loom motors, two Quick-Clean motors, and a new improved card drive.

THE LOUIS ALLIS CO. (22A)
427 E. Stewart St., Milwaukee, Wis.

Features adjustable speed drives, redesigned motors, and a new line of rerated motors.

Representatives at booth:
B. R. Becker — L. Allis, Jr.
J. B. Munson — C. G. Skidmore
R. J. Murphy — R. J. Weesner
A. V. Barron — H. L. Kelly
C. T. Nash — R. A. Zastrow
R. J. Overstreet — W. C. Conrad
W. S. Altschwager
C. O. Abrahamson
M. E. Weitekamp

ALUMINUM CO. OF AMERICA (1A)
Alcoa Bldg., Pittsburgh 19, Pa.

Features aluminum mill products, including extruded shapes, castings, forgings, and tubing. Illustrations of the application of aluminum alloys to various types of textile machinery will be shown.

Representatives at booth:
H. H. Nuernberger — C. Braglio
R. W. Irwin, Jr. — J. B. West

AMERICAN AIR FILTER CO., INC. (843G)
215 Central Ave., Louisville 8, Ky.

Features an automatic lint filter.

Representatives at booth:
H. J. Noles — C. Wright
J. May

AMERICAN DYESTUFF REPORTER (835G)
44 E. 23rd St., New York, N. Y.

Features a textile publication.

AMERICAN FLOOR PRODUCTS CO. (814G)
4922 Wisconsin Ave., N. W., Washington, D. C.

AMERICAN LAVA CORP. (21A)
Cherokee Blvd., Chattanooga, Tenn.

Features thread guides.

Representatives at booth:
J. B. Shacklett — J. S. Gosnell
J. E. Spearman

AMERICAN MOISTENING CO. (115B)
260 W. Exchange St., Providence 1, R. I.

Features humidification and humidity-control equipment, including straight humidification systems, ductless evaporative-cooling systems, unit dry-duct systems, and central station systems.

Representatives at booth:
H. B. Bradford — J. D. Johnson
M. H. Irons — L. Terry, Jr.
H. R. Rich — W. C. Everett
N. B. Chase — M. McCall
W. A. Mullins — S. B. Planton
J. H. Waldrip — J. Townsend
W. L. Johnson

AMERICAN PAPER TUBE CO. (256B)
93 Hazel St., Woonsocket, R. I.

Features paper tubes, quills, and bobbins.

Representatives at booth:
H. L. Amrhein — S. Adams
R. J. Guerin — D. M. Beattie
G. M. Sanford

AMERICAN RIETER CO., INC. (144C)
Box 147, Arlington, N. J.

Features spinning machinery and accessories for cotton, worsted, wool, and synthetic fibers.

Representatives at booth:
F. Kraehenmann — R. O. Halter
N. L'E. Fawcett — J. F. Dulken
W. B. Plowden
D. E. Williams, Jr.
Dr. H. Keller
A. Sailer

AMERICAN SCHIESS CORP., TEXTILE MACHINERY DIV. (1014E)
Ridgeway Station, Stamford, Conn.

Features woolen and worsted equipment.

Representatives at booth:
G. Giraudi — T. Gellerman
E. Stiefel — H. Reinhold
J. J. Keyser

AMERICAN STANDARD FABRICATORS CORP. (817G)
355 Walton Ave., Bronx 51, N. Y.

Features a combination single-package dyeing and high-speed extracting and drying machine in operation and a stainless-steel dye beam.

Representatives at booth:
G. T. Kreis — G. H. J. Boyd
N. M. Manfra

AMERICAN VISCOSE CORP. (358D)
350 Fifth Ave., New York, N. Y.

Features the Avcoset program for quality control of washable rayon fabrics. Rayon staple and filament yarns, Filatex elastic yarns, and Vinyon staple will be shown.

Representatives at booth:
G. L. Storm — A. R. Wachter
F. T. Williams — W. E. Scholer
T. H. Andrews — F. F. Hilson
J. W. Geary, Jr.
M. V. Macfarlan
J. C. Wilmerding

AMERICA'S TEXTILE REPORTER (270C)
236 Congress St., Boston, Mass.

Features a textile publication.

ANDERSON MACHINE SHOP, INC. (561F)
Brook Rd., Needham Heights, Mass.

Features the Pacific evenness tester, the Pacific integrator, and the Pacific staple cutter.

Representatives at booth:
J. G. Anderson
A. G. Anderson

ANDREWS & GOODRICH, INC. (78F, 840G)
336 Adams St., Dorchester, Mass.

ARMCO STEEL CORP. (292C)
Middletown, Ohio

Features textile-mill machinery made from Armco stainless steel. Stainless steels for field welding and a new aluminized steel for dryers and other heat and corrosion-resistant applications will be shown.

Representatives at booth:
G. H. Klouman

ARMSTRONG MACHINE WORKS (917G)
816 Maple St., Three Rivers, Mich.

Features a glass model of the Armstrong steam trap operating on 7-lb. steam pressure. Steam humidifiers and sectional models of other Armstrong equipment will also be shown.

Representatives at booth:
T. H. Rea — O. E. Ulrich

THE ARROW-HART & HEGEMAN ELECTRIC CO (868G)
103 Hawthorn St., Hartford, Conn.

Features a new loom switch and a new line of lint-proof enclosures for magnetic switches.

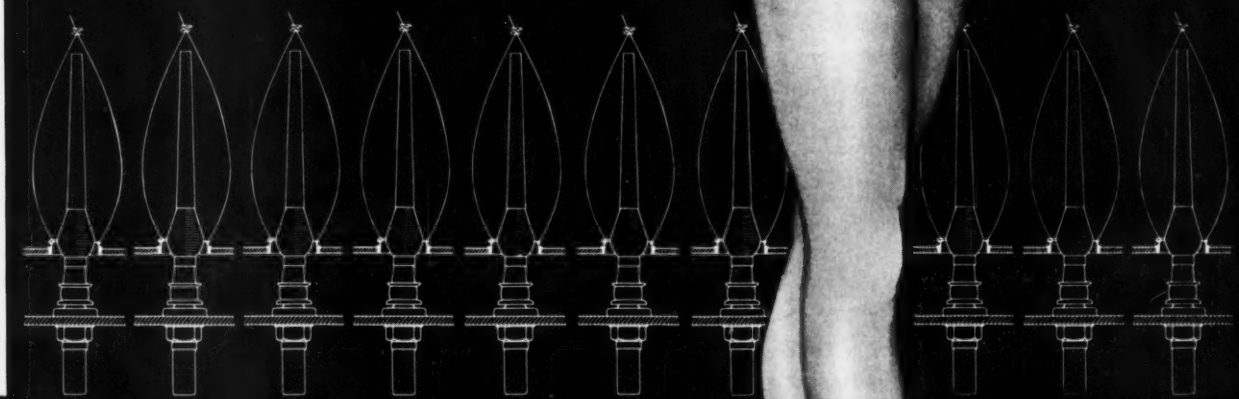
ASHWORTH BROS., INC (579F)
Fall River, Mass.

Features card clothing, breaker clothing, lickerin wire, garnett wire, Platt's metallic wire, and woven-wire conveyor belts.

Representatives at booth:
W. J. Flynn, Jr. — J. E. Seacord
G. Ashworth — T. F. Hart
A. R. Bechtel — H. Ashworth
G. A. Davis — C. E. Lalime
F. L. Armitage
J. M. Reed
R. C. Ashworth, Jr.
A. E. Johnston, Jr.

Rieter

Rieter spindles
and
machines operate with
the elegance and precision
of
a true performer



Rieter established 1795

build modern machinery of highest quality which work with the precision of a fine Swiss watch, ensuring a more efficient and economical performance of the spinning operation

Joh. Jacob Rieter & Co., Limited, Winterthur/Switzerland

Representatives all over the world. For the United States and Canada:
American Rieter Company, Inc., P.O. Box 147, Arlington, N.J.

Canadian Representative: Fawcett & Co., Toronto 3, Ontario
Southern Representative: Belton C. Plowden Co., Griffin, Ga.

Guide to Exhibitors

ASKANIA REGULATOR CO. (844G)
240 E. Ontario St., Chicago 11, Ill.

Features a cloth guide for tenter frames and other machines; measures and controls for all types of textiles.

Representatives at booth:
W. W. Wheeler F. J. Markey
G. A. Heinemann R. J. Kroth
R. J. Matteson W. L. Vaaler

AUTOMATIC WEB CONTROL MFG. CO. (882G)
P. O. Box 878, Oklahoma City, Okla.

Features automatic guiding equipment. A new cambering roller method and a newly developed pneumo-hydraulic power unit will be shown.

Representative at booth:
I. L. Fife

BACHMANN UXBRIDGE WORSTED CORP. (712A)
Uxbridge, Mass.

Features an automatic slasher front end, a hot-air slasher dryer, and a size box.

Representatives at booth:
P. J. Wenzel I. L. Griffin
E. S. Creighton

W. H. BAGSHAW CO., INC (80F)
Pine St., Nashua, N. H.

Features textile machinery repair parts, including picker lags and textile pins. Special lags for picking synthetic fibers will also be shown.

Representatives at booth:
T. W. O'Day M. H. Bagshaw

THE BAHNSON CO. (11A)
1001 S. Marshall St.,
Winston-Salem, N. C.

Features textile air-conditioning and humidification equipment. Scale models of the Humiduct system, the Centrispray system, and the central-station system will be on display. Component parts for these systems will be shown. The recently developed Allred cleaner, an automatic traveling cleaner, will be included in the exhibit.

Representatives at booth:
A. H. Bahnson, Jr.
W. M. Fulp R. T. Hodgdon
H. J. Haslam R. M. Anderson

BARBER-COLMAN CO. (105D, 377D)
Rockford, Ill.

Features a new super-speed warper, a new large-package creel, a new portable warp-tying machine, a large-package spooler, a warp-drawing machine, and a standard portable warp-tying machine.

Representatives at booth:
R. G. Ross E. W. Rogers
W. Bauer, Jr. R. W. Butler
H. G. Hoffman J. C. Ballard
W. P. Turner J. F. Carter
F. R. Lincoln L. L. Lideen
J. G. Pike, Jr. J. Savage
F. D. Taylor R. W. Cotta
N. H. Alford E. C. Curran

BARCO MFG. CO. (1020C)
500 N. Hough St., Barrington, Ill.

Features steam revolving or rotary joints, flexible ball joints, self-aligning swivel joints and swing joints.

Representatives at booth:
J. O. Heyworth F. M. Moore
D. R. Whitehead R. E. Mason
B. T. Conybear G. Garland

BARRELED SUNLIGHT PAINT CO. (262B)
Providence 1, R. I.

Features a new mildew-resistant undercoat and gloss finish for use on ceilings and walls and engineered colors for improving seeing and working conditions.

Representatives at booth:
A. S. West H. A. Solie
H. Eastwood C. L. Park
F. K. McCarthy P. Tuthill

EDWARD S. BEARD (865G)
Box 322, Spring City, Pa.

Features stainless-steel spreaders, a cloth-pulling machine, and aluminum pot eyes.

Representatives at booth:
E. S. Beard L. Krasley

BEETLE BOAT CO. (343E)
New Bedford, Mass.

Features Fiberglas trucks and boxes.

BIJUR LUBRICATING CORP. (263B)
151 W. Passaic St.,
Rochelle Park, N. J.

Features automatic lubrication systems for textile machinery. New solenoid-operated lubricators will be on display. "Fiber to Fabric" is the theme of the booth, and the use of automatic lubrication on all types of textile-mill machinery will be shown.

Representatives at booth:
J. B. Henderson C. D. Lassiter
W. Q. Timpson H. J. Autens
A. S. Cherevko

BIRCH BROS., INC. (397D)
32 Kent St., Somerville, Mass.

Features dyeing and finishing machinery and mill sewing machines. A recently developed ball-bearing counterbalanced tacking machine head will be on display, as well as large photographs of a cotton-carpet finishing range and a cloth-opening and vacuum-extracting range that is floor mounted.

Representatives at booth:
H. W. Birch F. W. Birch
C. W. Birch, Jr.
R. Briggs

J. BISHOP & CO. (342E)
Platinum Works, Malvern, Pa.

CHARLES BOND CO. (1030C)
617-623 Arch St., Philadelphia, Pa.

Features special tanned-leather loom strapping and friction leathers, flat and round leather belting, Red Head pickers, and loom straps, checkstraps, harness straps, lug straps, hold-up straps, bumper straps, and bunters. Stock gears and related products will also be on display.

Representatives at booth:
C. C. Bond E. Farley
C. C. Bond, Jr. F. Neal
W. S. Whiteman

BENJAMIN BOOTH CO. (347E)
Allegheny Ave. & Janney St.,
Philadelphia, Pa.

Features straight and bent-tooth Strip-O-Matic card clothing.

Representatives at booth:
E. A. Snape, Jr. R. Todd
N. E. Aderhold O. D. Landis
W. H. Martin C. G. Stover

BRIGGS-SHAFFNER CO. (559F)
500 Brookstown Ave.,
Box 188 Salem Sta.,
Winston-Salem 2, N. C.

Features aluminum section beams, tricot beams, loom beams, and quill boards.

Representatives at booth:
P. H. Johnson
C. A. Sinquefield

BRUSH ELECTRONICS CO. (822G)
3405 Perkins Ave., Cleveland, Ohio

Features the uniformity analyzer and the recently developed tension analyzer.

Representatives at booth:
D. Gaskill H. Schecter
A. Ondis A. Walcutt

THE BULLARD CLARK CO., E. H. Jacobs Northern Div., Danielson, Conn., E. H. Jacobs Southern Div., Charlotte, N.C. (805G)

Features loom supplies, including lug straps, picker sticks, sweepsticks and connectors, leather and fabric straps and strapping, dobby cords, holdups, pickers, bumpers, race plates, jack sticks, binders, swells, cloth-roll blocks, brake lining, and sand and take-up-roll covering. The Verybest thread cutter for battery looms will be featured.

Representatives at booth:
W. R. Muller W. Lundgren
E. J. Bullard A. M. Romero

THE BUNTING BRASS & BRONZE CO. (69F)
715 Spencer St., Toledo, Ohio

Features bronze bearings.

Representatives at booth:
R. R. Hirsch W. C. Bracken
B. Van Steenburgh
W. J. McTighe

BURLINGTON ENGINEERING CO. (9A)
Graham, N. C.

Features a stainless-steel tricot pressurized-dyeing machine.

Representatives at booth:
J. S. Williamson D. L. Lomax
W. J. Newcomb J. M. Dixon

H. W. BUTTERWORTH & SONS CO. (539F)
Philmont Rd., Bethayres, Pa.

Features a scale model of a new printing machine, an improved Simpson cut-off winder, a cylinder drying machine, a pressure boil-off jig, an embossing calender, and a padder.

Representatives at booth:
J. E. Butterworth C. E. Hunter
D. Butterworth E. S. Pierce
F. N. Spoerl S. Brooks
T. H. Davis, Jr. J. J. Sipple
D. Butterworth, Jr.
J. H. Zahn
W. Taylor
J. E. Butterworth, Jr.

C. I. T. CORP. (320E)
1 Park Ave., New York 16, N. Y.

Features finance service for the installment purchasing of textile machinery.

Representatives at booth:
S. D. Maddock W. H. Connery
R. S. Murphy C. C. Goss
E. T. Neville D. E. Kidd
C. E. Trudeau G. Allis
D. C. Brown D. E. Grow
H. A. Post E. H. Weren
W. H. Schilling

A. B. CARTER, INC. (38A)
226 Linwood St., Gastonia, N. C.

Features the Boyce weaver's knotter and spinning and twister travelers.

Representatives at booth:
E. L. Ramsey W. L. Rankin
E. H. Gregg J. R. Richie
J. B. Carter P. L. Piercy
C. E. Herrick J. W. Brown
R. A. Haynes J. K. Davis
D. E. Phillips

CEN-TENNIAL COTTON GIN CO. (908G)
Box 1318, Columbus, Ga.

Features a fiber opener, a separator, an aerator, a steel-enclosed blending feeder, and a steel feed table.

Representatives at booth:
S. K. Dimon M. McLeod
A. Harmon J. E. Brown

CENTURY ELECTRIC CO. (126aaB)
1806 Pine St., St. Louis 3, Mo.

Features selective-speed drive units, slip-ring motors, lint-free textile motors, a fractional-horsepower motor, and a newly designed integral-horsepower motor. Operators' panels will be set up to enable visitors to the booth to operate the equipment.

Representatives at booth:
R. N. Hill G. C. Henderson
E. S. Moore G. A. Bumann
F. Powers W. J. Nace
B. Tebo R. E. Lynch
W. C. Kohl T. K. McKamy
A. Neher D. H. Schaet
P. Gerst H. McInerney

CHANDLER MACHINE CO. (291C)
Ayer, Mass.

Features pleating machines, including a permanent pleating machine, and pinking and swatch-cutting machines.

Representative at booth:
R. C. Maxant

CHEMICOLLOID LABORATORIES (846G)
30 Church St., New York 7, N. Y.

Features the Charlotte colloid mill. A laboratory and pilot-plant model of the new Model ND-2 will be on display.

Representatives at booth:
D. F. O'Keefe E. E. Ball
L. E. Putnam W. H. Behrns

CHRYSLER CORP., AMPLEX DIV. (16aaA)
P. O. Box 2718, Detroit 31, Mich.

Features the following Oilite products: self-lubricating bearings, finished machine parts, metal filters, and cores, bar and plate stock.

CLARK-CUTLER-McDERMOTT CO. (1000F)
Franklin, Mass.

Features antivibration pads for use under heavy machinery.

Representatives at booth:
F. R. McDermott R. Schmidt
J. M. Stevens

THE CLEVELAND GRAPHITE BRONZE CO. (364D)
17,000 St. Clair Ave.,
Cleveland, Ohio

Features sleeve bearings and bushings made of various alloys. Cletex, a cellulose fiber lining material impregnated with a lubricant, will also be shown.

Representatives at booth:
L. W. Christenson
C. A. Williams
H. P. Gusdane
L. A. Douglass

"EXHIBIT A" at the Textile Exhibition

NOTHING ROLLS LIKE A BALL

At New Departure's display at the Exhibition you'll see the latest developments in **ball** bearings for textile machinery, including the newest Self-Sealed bearings. Designed for today's higher speeds . . . greater loads . . . increased production demands . . . New Departure textile bearings require little or no attention for years at a time!

Since introducing the first self-sealed **ball** bearing 27 years ago, New Departure has developed and tested more **ball** bearing seals and lubricants than any other manufacturer.

Talk to New Departure about the latest textile bearings. New Departure's engineering staff is always at your service!

NEW DEPARTURE
BALL BEARINGS

NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONNECTICUT
Plants also in Meriden, Connecticut, and Sandusky, Ohio
In Canada: McKinnon Industries, Ltd., St. Catharines, Ontario

 For more information, write direct or use Reader Service post card.

Guide to Exhibitors

THE CLEVELAND WORM & GEAR CO. (608A)
3249 E. 80th St., Cleveland 4, Ohio

Features worm gearing, worm-gear speed reducers, manual and automatic centralized lubricating systems, and a variable-speed unit. A new speed variator will be on display.

Representatives at booth:
H. Dingle
L. O. Witzenburg — C. Johns
D. H. Rowe — D. Leader

CLINTON FOODS, INC. (54C)
Clinton, Iowa

Features products from corn.

Representatives at booth:
A. C. Junge — B. L. Estes
R. C. Rau — J. F. Rogers
G. Gilbert — C. F. Cline, Jr.
E. F. Patterson
W. E. Wentworth

CLOVERLEAF-FREELAND CORP. (802G)
Hazleton, Pa.

Features a new bobbin, a new all-aluminum take-up shaft, an all-Bakelite winder-spinner bobbin, a molded-barrel take-up shaft, and mandrels and other accessories.

Representatives at booth:
T. Coxe — W. H. Miller
R. F. Makepeace

COCKER MACHINE & FOUNDRY CO. (535F)
Chestnut St., Gastonia, N. C.

Features a high-speed cotton warper, a high-speed rayon warper, and a high-speed combination slasher all being shown for the first time. A high-speed tricot warper and accumulator rolls and new creels also will be shown.

Representatives at booth:
J. Cocker, III — T. F. Suggs
D. L. Friday — H. W. Groce
J. C. Bodansky — P. Sherrill
D. Shepherd — J. Etheredge
O. Davis — J. Schrumm
F. H. Cunningham — E. F. Friday

COLLINS BROS. MACHINE CO. (8A)
647 Roosevelt Ave., Pawtucket, R. I.

Features a twister.

Representatives at booth:
H. Collins — K. H. Inderfurth
J. P. Weach — B. F. Collins, Jr.

CONTAINER CORP. OF AMERICA (557F)
Manayunk, Philadelphia, Pa.

CONTINENTAL-DIAMOND FIBRE CO. (271aaC)
Newark, Delaware

Features the Spartan truck and other fibre trucks, fibre and dilecto boxes, fibre cans, and fibre barrels. Celeron textile parts, pot eyes, loom parts, and Celoron gears will also be shown.

Representatives at booth:
L. Simmons, Jr. — O. Thomas

COOK-P&N MACHINE CO., INC. (73F)
365 Dorchester Ave., Boston, Mass.

CORN PRODUCTS SALES CO. (1025C)
17 Battery Place, New York 4, N. Y.

Features starches, dextrines, and gums.

Representatives at booth:
H. Baker — A. Simpson
H. Harris — A. H. Kelley
J. Kulz — W. R. Joyner
W. Bailey — P. A. Donaghy
J. Hill — A. A. Harden

THE COTTON TRADE JOURNAL (811G)
Hickman Bldg., Memphis, Tenn.

Features a textile publication.

COURTAULDS, INC. (860G)
600 Fifth Ave., New York 20, N. Y.

Features fabrics and garments made from Coloray, a solution-dyed rayon-staple fiber.

Representatives at booth:
A. A. Macdonald — G. V. Lund
A. H. Marriott — R. Dunford
W. H. Ward — Miss R. Fox

WILLIAM CRABB & CO. (339aaE)
Box 95, Black Mountain, N. C.

Features textile pins and lag sections.

Representatives at booth:
A. P. Sommer
J. C. Bennett, Jr.
J. C. Bennett, Sr.

CROMPTON & KNOWLES LOOM WORKS (323E)
93 Grand St., Worcester, Mass.

Features weaving equipment. Seven new looms will be running.

Representatives at booth:
F. W. Howe — A. M. Herman
H. R. Wing — R. A. Sharpe
J. F. Molloy — H. V. Foster
J. H. Doyle — W. O. Fisher
W. C. Howe — J. E. Hewitt
J. C. Irvin — L. Burgess
G. M. Olmstead

CURLATOR CORP. (812G)
501 W. Commercial St., E. Rochester, N. Y.

Features nonwoven-fabric machinery. The Rando-Feeder and Rando-Webber and the improved Rando-Feeder design will be on display.

Representatives at booth:
J. W. Ingle — H. H. Langdon
F. M. Buresh — R. E. Marks

CURTIS & MARBLE MACHINE CO. (134C)
72 Cambridge St., Worcester, Mass.

Features an air-operated cloth-folding machine. A new rolling-head will also be shown.

Representatives at booth:
W. F. Woodward — R. H. Marble
R. E. Steere — G. E. Marble
L. F. Remington — R. Gamble
F. MacKay — F. Travers

CUTLER-HAMMER, INC. (427D)
315 N. 12th St., Milwaukee, Wis.

Features magnetic starters and switches.

Representatives at booth:
P. S. Jones — F. L. Sheram
F. A. Wright — R. H. Hanson
M. R. Brice — C. V. Topliffe
J. A. Anderson — C. C. Corey
J. P. Simon — A. E. Bahrt
G. E. Hunt — K. G. Firchow
W. E. Addicks — R. J. Keelov
W. M. Reese — C. D. Capelle
F. A. Miller, Jr.
C. L. Wymelenberg

DAFFIN MFG. CO. (834G)
Keller Ave. & Fruitvile Pike, Lancaster, Pa.

Features a high-capacity industrial humidifier, a directional-dome humidifier, a plenum humidifier, and a refrigeration humidifier.

Representatives at booth:
P. A. Herr — B. W. Dickinson

DAILY NEWS RECORD (350E) FAIRCHILD PUBLICATIONS
7 E. 12th St., New York, N. Y.

Features a textile publication.

DAVIS & FURBER MACHINE CO. (467E)
North Andover, Mass.

Features an 84-in., three-cylinder woolen card; a 144-spindle spinning frame; a 24-roll double-acting napping machine; an electro-pneumatic warp spooler; and an 11-in. sample card. Samples of Flexifort card clothing and some condenser tapes and rub aprons will also be shown.

Representatives at booth:
A. W. Reynolds — E. Atwood
D. Simpson — E. Bramhall
I. Howes — J. Mansfield
J. N. Frye — E. Salesky
J. Kooistra — W. Truslow
J. C. Cantlin — H. Newby
L. Bussiere — T. Rockwell
A. Gendron — W. Baxter
J. Pickering, Jr. — R. Chase
G. A. Connelley

DAVISON PUBLISHING CO. (368D)
Ridgewood, N. J.

Features a textile publication.

DEERING, MILLIKEN RESEARCH TRUST (915G)
Box 27, Pendleton, S. C.

Features a ply-twisting machine.

DIEHL MFG. CO. (259B)
Finderne Plant, Somerville, N. J.

Features various types of loom motors, power transmitters, and fans.

Representatives at booth:
W. O. Langille — W. B. Hunter
C. F. Bruder — R. D. Ingalls
F. A. Kolyer — E. P. Turner
A. R. Booth — L. A. Wendell
W. G. Stainton — W. J. Parish
J. S. Wood — A. J. Murphy
H. W. Kloth

W. D. DODENHOFF CO., (601A)
619 Rutherford St., Greenville, S. C.

Features Fiber-Meter automatic blending machinery and fiber-tinting machinery.

Representatives at booth:
Mrs. W. D. Dodenhoff
W. F. Leineweber, Jr.
R. E. King — A. V. Moody
W. M. Egbert

DRAPER CORP. (108B, 222B)
Hopedale, Mass.

Features looms. Seven new looms will be running at the exhibit.

Representatives at booth:
T. H. West — W. Kilgore
W. K. Child — L. M. Newell
W. M. Mitchell — H. E. Foster
D. Marshall — J. Via
J. C. Huff — J. B. Jackson
W. F. Northrop

DUESBERG-BOSSON OF AMERICA, INC. (603A)
Box 25, Jefferson, Mass.

E. I. DU PONT DE NEMOURS & CO., INC., TEXTILE FIBERS DEPT. (886G)
Wilmington, Del.

Features services to the textile industry.

DURANT MFG. CO. (261B)
1929 N. Buffum St., Milwaukee 1, Wis.

Features new electric predetermined counters, improved pick and hank counters, and new electric contactors. Standard textile counters will also be shown.

Representatives at booth:
R. B. Winkler — B. J. Glista
L. A. Nourie — W. H. Burr
J. K. McGinley — J. L. Baker
R. G. O'Connell

EASTERN YARN MILLS (878G)
1530 McDonald Ave., Brooklyn, N. Y.

Features solution-dyed yarns.

EDDA INTERNATIONAL CORP. (874G)
468 Fourth Ave., New York 16, N. Y.

Features the Titan automatic warp-tying machine and the Excelsior reed-grinding and brushing machine.

Representatives at booth:
B. Gudjonsson — H. Lindqvist
H. A. Nagel

EDGCOMB STEEL CO. (857G)
D St. below Erie Ave., Philadelphia, Pa.

Features stainless-steel sheets, strip, plates, angles, tubing and pipe, fastenings, and fittings.

Representatives at booth:
C. S. Vogel — S. B. Mathews
J. B. Owen — P. B. Kline
L. Edgcomb, Jr. — O. Persons, Jr.
W. S. Lutz — W. R. James
H. I. Lutz — T. A. Wilder
R. A. Shattuck — J. J. Drexler
J. A. Van Hook — R. S. Stauffer
F. F. Rose

ELASTIC STOP NUT CORP. OF AMERICA (354E)
1027 Newark Ave., Elizabeth, N. J.

ENGINEERED PLASTICS, INC. (859G)
Gibsonville, N. C.

Features plastic bobbins, plastic caps, and other accessories for handling yarns. Tire-cord twister bobbins will be featured in the exhibit.

Representatives at booth:
J. H. Windle, Jr. — C. H. Phillips
D. M. Davidson, Jr.

ERIEZ MFG. CO. (431D)
1945 Grove Drive, Erie, Pa.

Features nonelectric magnetic equipment, including spiked-apron magnets, pneumatic humps, and suspended plate magnets and doffer-truck magnets. The Magnalarm, which signals when a separator is overloaded, will be shown for the first time.

Representatives at booth:
N. Hirt — E. C. Miller
R. C. Hoff

THE FAFNIR BEARING CO. (252B)
New Britain, Conn.

Features ball bearings and textile accessories equipped with ball bearings. Ball-bearing pillow blocks will be included in the exhibit.

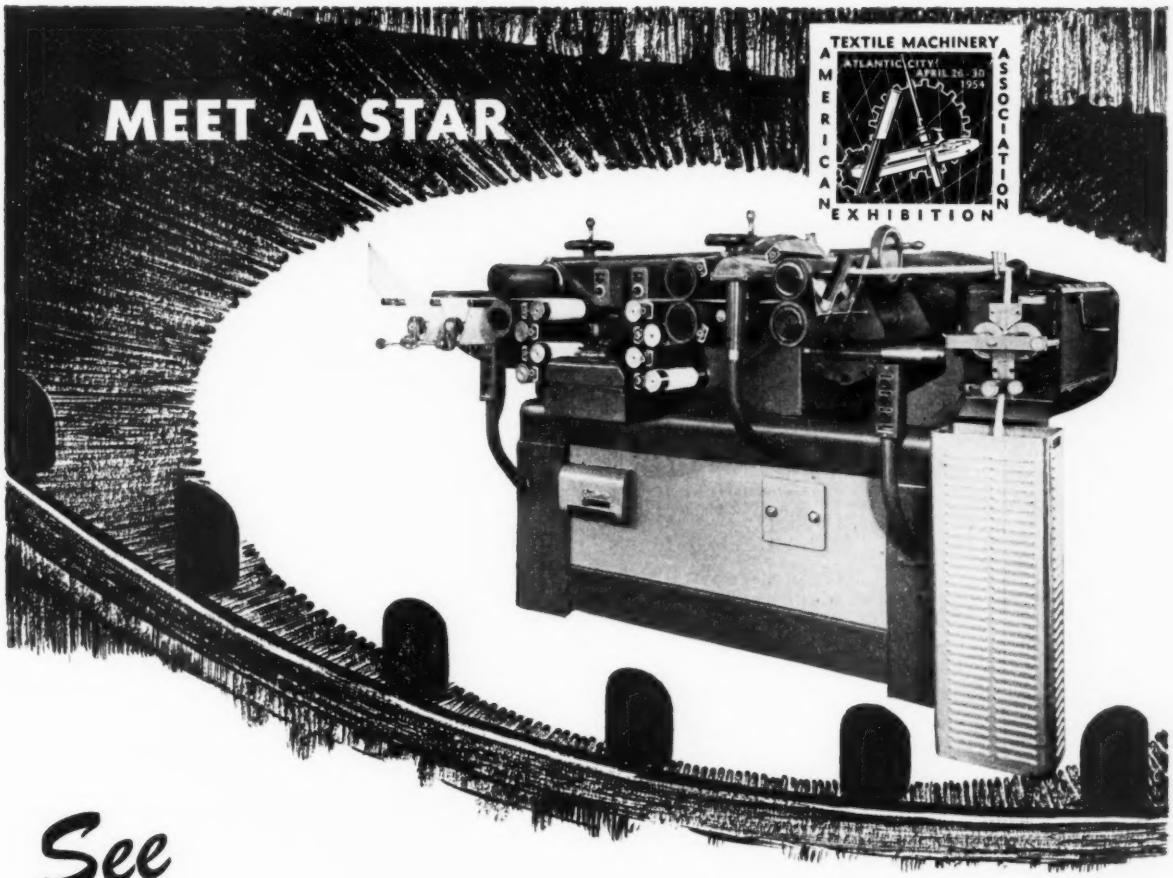
Representatives at booth:
C. A. Berg — S. D. Berg
D. M. Davidson — T. L. Hunt
F. Leister — G. H. Raley
A. G. Laughridge

THE FARVAL CORP. (609A)
3249 E. 80th St., Cleveland, Ohio

Features manual and automatic centralized lubricating systems. A new variable-speed transmission unit will be shown for the first time.

FAULTLESS CASTER CORP. (824G)
Evansville 7, Ind.

Features ball-bearing top rolls for spinning and roiling frames and a complete line of



See

"Tow To Sliver In One Operation"

Starring TURBO STAPLER

TEXTILE MACHINERY EXHIBITION • ATLANTIC CITY

BOOTH 16CC

A SENSATION IN MILL TESTS • SEE A STAR IN ACTION • ALL DAY • EVERY DAY

When you meet Turbo Stapler you'll meet a seasoned star — with a successful run in mill after mill. What it does for synthetic fibers has made news throughout the industry. It will be running Orlon*, but it can be changed almost instantly to any synthetic fiber. Don't miss this show! See how you can get more merchandise from the same amount of yarn. See how you can increase yarn strength. See how you can increase/decrease luster. See how you can increase tenacity. See how you can increase yarn evenness. See how you can increase loft. See . . . this machine.

*duPont T. M. for acrylic fiber

TURBO SINCE 1929

TURBO MACHINE COMPANY, LANSDALE, PA., U. S. A.

Makers of Precision Hosiery Finishing Machines — Crimpers — Steam Setters

See C&K's

Guide to Exhibitors

casters with drawn-steel wheels in 4-, 5-, and 6-in. sizes.

Representatives at booth:
R. B. Burris R. S. Brice
S. S. Whitely H. Sherlock
C. L. Yeomans D. Sherlock

THE FELTERS CO. (39A)
210 South St., Boston 11, Mass.

Features Unisorb pads.

Representatives at booth:
R. E. Ferguson, Jr.
P. N. Wheeler R. V. Dwyer
J. W. Morrison R. E. Ferguson
C. H. Sykes, Jr. L. R. Ferguson
N. A. Hill J. Gilfillan

FIBRE & FABRIC (848G)
465 Main St., Cambridge, Mass.

Features a textile publication.

FIBREMOLD, INC. (864G)
125 Riverside Ave., Medford 55, Mass.

Features metal-reinforced resin-impregnated Fiberglas moldings, including yarn-conditioning boxes, bobbin boxes, general-purpose containers, and an open-end tray.

Representatives at booth:
F. Fyans P. F. Collins
A. List

FIELDEN INSTRUMENT DIV., ROBERTSHAW-FULTON CONTROLS CO. (803G)
2920 N. 4th St., Philadelphia, Pa.

Features process and quality-control instruments. A wool-carding machine control, a high-speed yarn analyzer, an electronic temperature control, a resistance-bulb thermometer recorder-controller, a yarn-evenness recorder and integrator, a Drimeter, and a Tektor level control will be on display.

Representatives at booth:
R. V. Coles R. M. Stotsenburg
A. F. Platt L. C. Connolly

FINNELL SYSTEM, INC. (1022C)
Elkhart, Ind.

Features electric scrubbing and polishing machines and industrial cleaning agents.

Representatives at booth:
J. E. Bates J. T. Core
F. F. Greetham D. A. Turnock
H. H. Dickson

FLETCHER WORKS, INC. (453D)
Glenwood Ave. & Second St., Philadelphia 40, Pa.

Features narrow-fabric looms, throwing machinery, and centrifugal extractors.

Representatives at booth:
W. H. Rometsch L. Egee
C. W. Moore W. Egee
R. Winward H. J. Roessel
J. D. Harrison G. W. Dudley
F. W. Warrington
T. B. Baldridge, Jr.

FOSTER MACHINE CO. (563F)
Westfield, Mass.

Features a new automatic machine for winding cones for knitting, warping, quilling, doubling, and twisting supply. A new winding machine with a spindle speed of 15,000 rpm. will be shown in addition to other winding machines.

Representatives at booth:
W. C. Chisholm C. B. Terry
E. C. Connor H. E. Swift
H. W. Ball E. P. Dodge
F. S. Stange H. A. Cadle
E. R. Davis E. H. Ely
F. A. Burke G. W. Mallory
R. B. Kendall P. H. Farmer
J. A. Moore
J. B. Davenport
H. L. Muschamp

FOXBORO CO. (353E)
Foxboro, Mass.

Features processing instruments. A controller for the automatic regulation of time-temperature schedules, a flow-control system for package-dyeing machines, instrumentation for the precise control of pneumatic loading equipment, and an instrument for the control of mill humidity will be shown.

Representatives at booth:
R. E. Beers S. C. Alexander
G. Hammer W. W. Barron
G. E. Clark W. H. Ridley
J. W. Gordon E. J. Exworth
H. H. Michelmore
E. W. Prendergast

ERNEST L. FRANKL ASSOCIATES (830G)
515 Madison Ave., New York 22, N. Y.

Will represent Officina Meccanica Saint' Andrea, Jakob Mueller, and Ab Svenska Textilmaskinfabriken.

Representatives at booth:
C. Schleifer A. Ansaloni
Ing. Bertolo J. Mueller
E. L. Frankl M. J. Weyl
G. Frankl B. Melbin

FRANKLIN CONTROL CORP. (816G)
1975 S. Allis St., Milwaukee 7, Wis.

Features adjustable-speed drives with a speed range in sizes from ¼ to 5 hp. A new magnetic-amplifier adjustable-speed drive with performance equal to electronic drives will be on display.

Representatives at booth:
F. S. Malick R. W. Moon

THE FULLER BRUSH CO. (704A)
Fuller Park, Hartford 2, Conn.

Features hand brushes, power-driven brushes, and new Fullergript blade sweeps.

Representatives at booth:
J. Grogan H. R. Nelson
B Reittinger L. W. Tilford
B. W. Anderson

GASTON COUNTY DYEING MACHINE CO. (82F)
Stanley, N. C.

Features yarn-dyeing equipment and component parts.

Representatives at booth:
G. H. Hacker Gordon Hacker
R. P. Craig

GENERAL ELECTRIC CO., APPARATUS DIV., Textile Industry Section (568F)
1 River Road, Schenectady 5, N. Y.

Features a standard loom motor, short card motor, screenless open textile motor, two-torque soft-start motor, Saco-Lowell SG-1 motor, short loom motor, high-speed spindle motor, hysteresis brake, d.c. gearmotor, speed variator for hosiery machines, AK switchgear braker, and a screened textile motor.

Representative at booth:
C. Ossenfort

GENERAL PLASTICS CORP. (914G)
165 Third Ave., Paterson 4, N. J.

Features textile equipment coated with Teflon for use in nonadhesive applications.

Representative at booth:
R. Goldsmith J. Ezechel

DAVID GESSNER CO. (206B)
41 Fremont St., Worcester, Mass.

Features cloth-finishing machinery, including a new Hydraflex napping machine and a new constant-tension center wind.

Representatives at booth:
J. P. Franklin R. L. Bernard
R. C. Franklin

GINSBERG MACHINE CO., INC. (310aaE)
224 Fifth Ave., New York 1, N. Y.

Features an individual selvage Trim-Master for automatic selvage trimming, an electro-sealer for label application, automatic electric scissors, and an individual Trim-Master for finishing departments.

Representatives at booth:
H. Stout W. Lieberman
S. Margolis P. Harris

GLENWOOD MACHINERY ASSOCIATES, INC. (905G)
85 Chestnut St., Newark, N. J.

Features an automatic bobbin-refinishing machine. An automatic machine for the refinishing and waxing of quills and for degreasing and cleaning will be shown for the first time.

Representatives at booth:
C. F. Jones, Jr. G. Westwater
H. C. Sonntag

GEORGE A. GOULSTON CO. (607A)
80 Federal St., Boston, Mass.

Features fiber lubricants.

Representatives at booth:
G. A. Goulston A. Winograd
P. A. Mazur B. Goulston

GRATON & KNIGHT CO. (349aaE)
356 Franklin St., Worcester, Mass.

Features textile leathers and leather belting. A new preformed bumper strap will be shown.

Representatives at booth:
E. C. Paddock J. L. Parker
J. G. Henrikson

GRINNELL CO., INC. (115B)
Providence, R. I.

GUBELIN INTERNATIONAL CORP. (1024C)
35 W. 53rd St., New York 19, N. Y.

Features roller-bearing spindles, two-for-one twisting spindles, variable-pitch sheaves, an optical locating device and drill chuck combined in one tool, and variable-speed pulleys.

Representatives at booth:
W. Gubelin H. P. Worth
H. Blocher

HARRIS PRODUCTS CO. (357D)
1929 E. 61st St., Cleveland 3, Ohio

Features rubber-bushed bearings and Vibrex fasteners.

Representatives at booth:
R. G. Bradley W. A. Smith
S. C. Stanley L. C. Winslow

HARTFORD MACHINE SCREW CO. (602A)
Hartford, Conn.

Features a new spindle base featuring a split-sleeve design.

HARTFORD RAYON CO., DIV. OF BIGELOW-SANFORD CARPET CO., INC. (821G)
261 Fifth Ave., New York, N. Y.

Features rayon-staple fiber for the apparel and carpet trades.

Representatives at booth:
H. M. Bailey, Jr.
G. R. McGrath
T. L. Leslie, Jr.

GEORGE S. HARWOOD & SON (463D)
50 Lagrange St., Worcester 8, Mass.

Features an improved Bramwell feeder that will be operating in conjunction with an 84-in. Davis & Furber woolen card.

HAYES INDUSTRIES, INC. (361D)
Jackson, Mich.

Features light-metal beams and bobbins. An aluminum section beam that was designed for nylon will be displayed.

Representatives at booth:
E. C. Hetherwick
G. B. Vass
W. H. Maxson W. D. Sharp
D. C. Bender J. E. Prins
J. S. Fallow, Jr. J. P. Laird
R. E. L. Holt, Jr. D Sellars
F. New

HAYSSEN MFG. CO. (117ccB)
1305 St. Clair Ave., Sheboygan, Wis.

Features a new wrapping machine for overwrapping a variety of textile products.

Representatives at booth:
R. P. Wilson J. O. Willis
H. E. McAvoy H. White
J. C. Johnston

HEANY INDUSTRIAL CERAMIC CORP. (5A)
New Haven, Conn.

Features textile guides and wear parts, including a pigtail, an insert pigtail, a finger tension gate, and patented traverse guides.

Representatives at booth:
A. O. Pieper H. Boveri
A. C. Pieper R. Gossett

HERMAS MACHINE CO. (342E)
225 Warburton Ave., Hawthorne, N. J.

Features mill cloth-room and dyehouse machinery. New equipment to be shown includes a selvage trimmer with automatic guiders, a heavy-duty inspecting and measuring machine, and a mixer for mixing printing inks and colors.

Representatives at booth:
W. S. Anderson G. P. Mason
R. R. Simpson M. Kindler
L. M. Kimberlain

HERR MFG. CO., INC. (84F)
318 Franklin St., Buffalo, N. Y.

Features conical rings and flyers of all types, including recently developed lightweight flyers for Helanca yarns.

Representatives at booth:
H. R. Atwood W. M. Woodard
C. M. Kitzmiller

THE HEWSON CO., INC. (589F)
443 Broad St., Newark 2, N. J.

Features a new automatic floor and equipment tester, high-speed static-control systems, high-voltage-d.c. insulation test sets, and master static-alarm systems.

Representatives at booth:
J. K. Hewson W. E. Krause
T. A. Collier A. G. Moore

HOBBS MFG. CO. (1017E)
26 Salisbury St., Worcester, Mass.

Features the Hobbs-Alquist constant-tension winder.

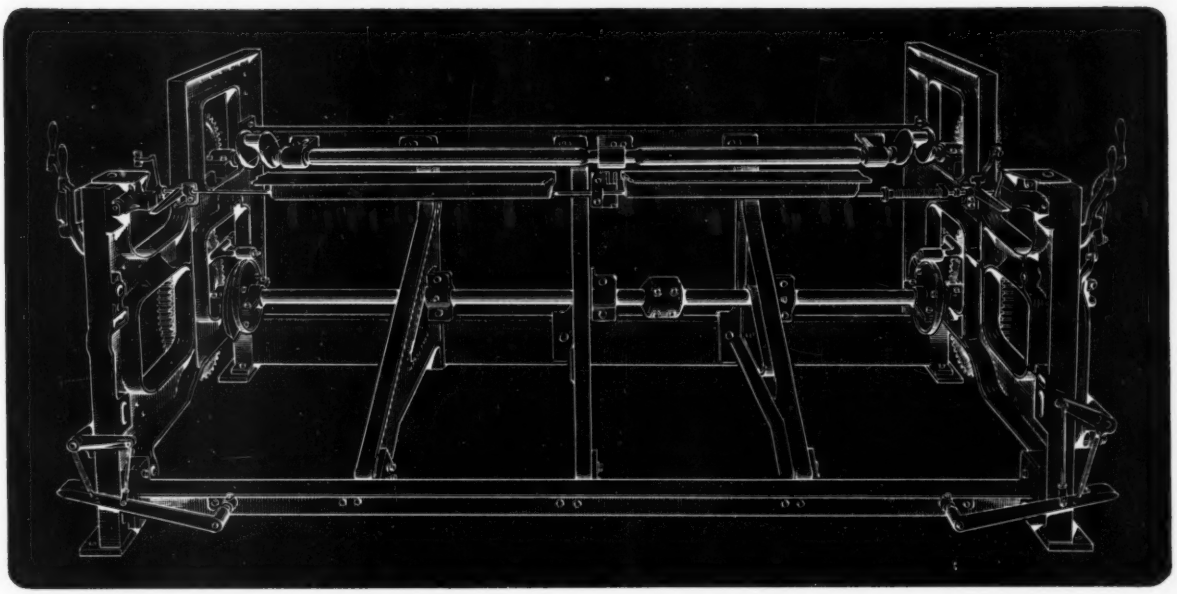
Representatives at booth:
S. F. Oakes

ALFRED HOFMANN NEEDLE WORKS, INC. (1000F)
3710 Hudson Ave., Union City, N. J.

Features a high-temperature laboratory dyeing machine and the Projectina testing machine.

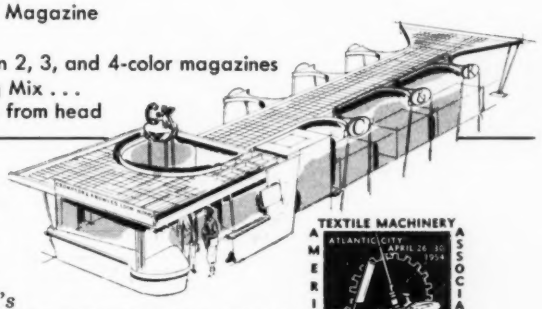
See C&K's

New MP Looms



C&K'S NEW MULTI-PURPOSE LOOMS give you wider versatility than any weaving equipment built today. Here is the principle:

To this Basic Frame: . . .	Add these Motions:
Loom Sides Cross Girts "A" Girts Drive & Shipping Protection Picking	Any Take-up Any Shedding Mechanism 1, 2, 3, or 4-color Rotary Magazine Any Let-off Vacuum Filling Control: On 2, 3, and 4-color magazines Box Motion: Call or Filling Mix . . . geared type or operated from head



These are the basic facts on C&K's NEW MULTI-PURPOSE LOOMS. Now, for the full story on what they can do for *your* profit picture, *make C&K's exhibit your first stop at the Show* . . . and see new standards of weaving performance in the making.

Here's where to see C&K's New Looms at . . . Booths 323 to 338—330AA to 331AA

TEXTILE MACHINERY EXHIBITION — AMERICAN ASSOCIATION — ATLANTIC CITY APRIL 26-30 1954

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are **WOVEN** Fabrics.

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Penna. · Charlotte, N. C. · Allentown, Penna.
Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

Guide to Exhibitors

HOLDSWORTH GILL SCREW CO., INC. (146C)
55 Sabin St., Pawtucket, R. I.

Features a new top-breaking machine, a new high-speed gill reducer with balling delivery, new gill-reducing machinery, and gilling-equipment accessories.

Representatives at booth:
J. L. Coon C. F. Curran
G. F. Bliss W. P. Rutley
W. E. Stearns

THE HOLO-KROME SCREW CO. (819G)
Hartford, Conn.

Features socket-screw products.

Representatives at booth:
W. C. Stauble J. I. Anthony
R. A. Modig L. Klauder
F. Paulsen

R. E. L. HOLT JR. & ASSOCIATES, INC. (44A)
Greensboro, N. C.

Features weaving supplies, guides, and bobbins.

R. H. HOOD CO. (316E)
19th & Westmoreland Sts., Philadelphia 40, Pa.

Features comb circles, fallers, miscellaneous textile combs, and special-process comb and gill-box aprons.

Representatives at booth:
H. G. Hood F. W. Hood
R. H. Hood, II W. F. Gill

HOWARD BROS. MFG. CO. (339E)
44 Vine St., Worcester, Mass.

Features card clothing for woolen, worsted, cotton, asbestos, and silk cards, and napper clothing and brush clothing.

Representatives at booth:
H. C. Coley C. H. Haynes
N. A. Mitchell T. J. Jackson
A. W. Englund E. J. Lawrence
H. S. Bolger H. Suggs
B. D. Hodges, Jr.

HUBBARD SPOOL CO. (554F)
Second St. & County Rd., Garrett, Ind.

Features stainless-steel and aluminum bobbins, combination wood-and-steel bobbins, aluminum tricot and section beams, and combination wood-and-steel loom and section beams.

Representatives at booth:
E. J. Hubbard R. M. Stout
G. G. Tucker, Jr.

HUNT LOOM & MACHINE WORKS, INC. (701A)
200 Academy St., Greenville, S. C.

Features the new HB-3 loom, a single-shuttle loom, and loom parts.

Representatives at booth:
T. T. Patton J. C. Galloway
T. H. Wood J. D. Federline
W. E. Henderson

RODNEY HUNT MACHINE CO. (159C)
Mill St., Orange, Mass.

Features the newly developed bleaching rangette.

Representatives at booth:
E. F. Harris L. V. Neese
J. W. Rembe C. H. Amidon
H. H. Belcher L. F. Tummey
M. G. Hopkins R. F. Powers
T. W. Kitchen N. W. Pandell
F. L. Wilkinson

JAMES HUNTER MACHINE CO. (113B, 218B)
North Adams, Mass.

Features wet-finishing and drying machinery, including a resin-treating range in motion, the Barotor, and several versions of the Leyland-Mycock ball-bearing expander.

Representatives at booth:
J. H. Hunter
H. F. Creegan R. Welsh
J. E. Burdick F. B. Morrill
E. Cannity E. C. Rust, Jr.
C. Endlein D. Spink
J. E. Woodworth

HYATT BEARINGS DIV., GENERAL MOTORS CORP. (533E)
4th St., Harrison, N. J.

Features roller bearings, twisting and spinning equipment, finishing machinery, and electric motors.

Representatives at booth:
J. R. Gilmartin
C. W. Kalchthaler
E. P. O'Neill E. Maurushat
C. C. Wardell P. Hutchinson
R. H. Gibbons G. P. Baxley

IDEAL INDUSTRIES, INC. (901G)
Bessemer City, N. C.

Features a new drawing frame with an improved high-speed drafting system and a new ball-bearing, plastic coiling mechanism.

Representatives at booth:
J. R. Whitehurst
E. B. Robinson
F. B. McDonald
A. S. Roebuck
E. F. Robinson

INDUSTRIAL BRUSH CO. (68aaF)
24-25 Woodside Ave., Little Falls, N. J.

Features industrial brushes.

Representatives at booth:
W. F. Enchelmaier
H. W. K. Enchelmaier
W. J. Enchelmaier

THE INDUSTRIAL DRYER CORP. (103D)
432 Fairfield Ave., P. O. Box 850, Stamford, Conn.

Features the H-W conditioner.

Representatives at booth:
F. W. Caesar P. H. Friend
H. Truesdale J. R. Tutt

INDUSTRIAL RADIANT HEAT CORP. (1002F)
Box 123, Gladstone, N. J.

Features Fiberglas radiant heaters and ceramic Superradiant heaters.

Representatives at booth:
A. G. Darlson
H. G. Anderson
G. F. Sundstrom

THE JOHNSON CORP (349E)
805 Wood St., Three Rivers, Mich.

Features pipe- and rod-supported and self-supporting rotary pressure joints.

Representatives at booth:
R. O. Monroe
W. R. Monroe
R. W. Gotschall J. Croce
T. O. Monroe W. T. Harding
J. L. Reed T. H. Abbey
C. W. Gill J. R. Greenhalgh

JOHNSON SERVICE CO. (1028C)
507 E. Michigan St., Milwaukee 2, Wis.

Features automatic temperature- and humidity-control equipment. A new electronic humidity controller will be on display.

Representatives at booth:
M. M. Herrick
L. C. Carlsen M. F. Rather
H. Hoffman S. T. Oliver

C. WALKER JONES CO. (1027C)
6135 N. Lambert St., Philadelphia 38, Pa.

Features industrial rubber rolls.

Representatives at booth:
H. H. Colehower
D. D. Trimble
H. E. Eldridge J. Seeburger

KAUMAGRAPH CO. (258B)
14th & Poplar Sts., Wilmington, Del.

Features an automatic selvage and backmarking machine, and dry transfers.

Representatives at booth:
T. H. Miller
B. P. Lindley A. W. Mickel

KEARNY MFG. CO. (309E)
681 Schuyler Ave., Kearny, N. J.

Features a yarn-conditioning machine and conventional winders.

Representatives at booth:
C. F. Dulken, Sr.
E. W. Erklentz
P. J. Sturzenegger
J. Rath
C. M. Baunach

KENNETT EQUIPMENT & MACHINERY CO. (341E)
Kennett Square, Pa.

Features materials-handling equipment.

WILLIAM KENYON & SONS (America) LTD (101E)
Paterson & Second Sts., Perth Amboy, N. J.

Features bonded-nylon spindle tapes.

WALTER KIDDE & CO., INC. (44aaA)
675 Main St., Belleville, N. J.

Features a standard tension compensator, a double-disk tension compensator, a warping-tension compensator with a new stop motion, and a model of a single-end cord-processing machine.

Representatives at booth:
E. L. Herbert J. H. O'Blenis
D. M. Kroll F. H. Muller

THE F. A. LAZENBY CO. (248B)
3106 Elm Ave., Baltimore, Md.

Features a new automatic cop winder, a bobbin winder, and a cop and butt winder.

Representatives at booth:
R. V. Watson R. S. Watson
O. R. Payne C. A. Bridener

LENKOTEX CO., INC. (837G)
136 Liberty St., New York, N. Y.

LINCOLN ENGINEERING CO. (273C)
5701 Natural Bridge Ave., St. Louis, Mo.

LINDE AIR PRODUCTS CO., DIV. OF UNION CARBIDE & CARBON CORP. (346E)
30 E. 42nd St., New York 17, N. Y.

Features sapphire guides and Alumina polishing powder.

Representatives at booth:
A. K. Seemann J. Haines
I. Brown, Jr. R. Haines

LINK-BELT CO. (90F)
307 N. Michigan Ave., Chicago, Ill.

Features power transmission and conveying equipment. A working model of a drive with electronically controlled P.I.V. variable-speed units will be on display. Another P.I.V. drive equipped with a new pneumatic control and a new line of geared flexible couplings will be shown, as well as roller-chain drives, a gearmotor, a worm-gear drive, and ball and roller bearings.

Representative at booth:
W. J. Nighbert

H. F. LIVERMORE CORP. (111B)
Allston Station, Boston 34, Mass.

Features improved loom parts, including thread cutters, complete parallel motion, vibrator combs, step stand, drive rod arms, and pick cam combinations.

Representatives at booth:
S. O. Dodge
L. G. Urquhart J. G. Phillips
C. Hammond J. S. Barnes
T. H. MacLeod J. J. Donaghy
E. W. Fanning W. T. Jordan

LOCKWOOD GREENE ENGINEERS, INC. (79F)
10 Rockefeller Plaza, New York 20, N. Y.

Features photographs of recent textile plants it has designed. Brochures showing its operation in the textile field will be available.

Representatives at booth:
S. B. Lincoln R. E. Barnwell
L. V. Geraghty M. Rogers
R. C. Trammell T. O. Ott

LOWELL TECHNOLOGICAL INSTITUTE (854G)
1 Textile Ave., Lowell, Mass.

Features educational material and some rare documents and books from the Alumni Memorial Library.

Representatives at booth:
Prof. J. H. Kennedy, Jr.
Prof. J. A. McLean
Prof. J. W. Bell
B. G. Skalkeas
J. V. Kopycinski

LYDON BROS., INC. (68F)
85 Zabriskie St., Hackensack, N. J.

Features a truck-loading twist setter.

Representatives at booth:
P. T. Lydon
J. P. McBride C. H. Gingher

EDWARD J. McBRIDE (872G)
Cottman & Wissinoming Sts., Philadelphia, Pa.

Features a new sealed mercury stop motion and new snap-on cone holders and special bowed spring spindles. Magazine creels, a carpet backsizing machine, and a narrow-fabric finishing machine will also be shown.

Representatives at booth:
Mr. McBride Mr. Kraemer

McGLYNN HAYS INDUSTRIES, INC. (800G)
Belleville, N. J.

McKIERNAN-TERRY CORP. (708A)
505 Manor Ave., Harrison, N. J.

Features a new multipurpose calender and calender rolls.

Representatives at booth:
K. Johnson B. Kaiser
R. Jones L. Whittelsey

MACBETH CORP. (271C)
P. O. Box 950, Newburgh, N. Y.

Features the Examolite fixture for grading and inspection lighting; the Gardner-Nickerson cotton colorimeter; the Macbeth-Munsell disk colorimeter; a basic color-matching light for use in the dyehouse and color laboratory, and one for color-shading and grading operations.

Representatives at booth:
N. Macbeth R. E. Meeker
W. B. Reese A. T. Hatton
E. F. Slaughter

Let's talk over - REAL OPERATING ECONOMY - PRACTICAL MACHINE EFFICIENCY

THE MODEL "60" WARP SPOOLER . . .
Replaces up to Five Old Machines

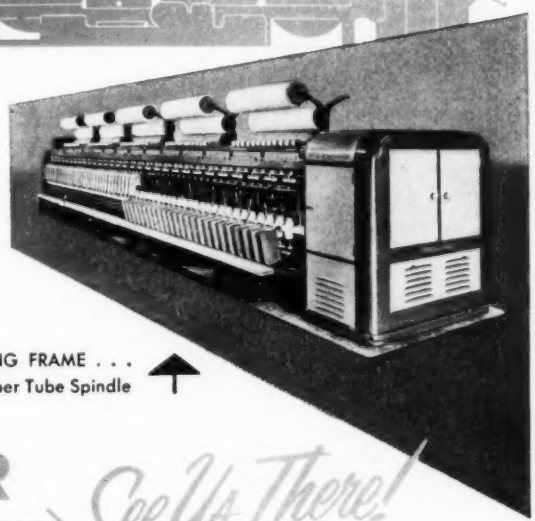
THE BRAND NEW "SIMPLEX" NAPPER . . .
Takes the Guesswork out of Finishing

THE 84 INCH MODEL "L" CARD . . .
Never Before on Exhibition

At Atlantic City — We certainly want to talk to you about four production leaders. They'll all be operating in the Atlantic City Exhibition Hall, April 26-30.

Designed for high speed economy, these four Davis & Furber Machines are setting new production records at tremendous cost reductions.

Be sure to see our staff for details.



THE MODEL "F" SPINNING FRAME . . .
Using the New Paper Tube Spindle

DAVIS & FURBER

See Us There!

Our Booths are Just Inside the Main Entrance

NORTH ANDOVER, MASSACHUSETTS
CHARLOTTE, NORTH CAROLINA

Guide to Exhibitors

MANTON-GAULIN MFG. CO., INC. (6A)
44 Garden St., Everett, Mass.

Features homogenizers. A single-stage textile homogenizing valve and an automatic recording pressure controller will be shown.

Representatives at booth:
D. G. Colony J. J. Dwyer
G. W. Eldridge W. A. Hewitt
R. A. Auerbach L. H. Rees
L. P. Deackoff F. Cahill

THE MARQUETTE METAL PRODUCTS CO. (144aaA)
1145 Galewood Drive, Cleveland 10, Ohio

Features roller-bearing spindles, top-drive filling spindles, and heavy-duty twister spindles.

Representatives at booth:
C. E. Miller W. J. Howell
J. J. Hallissy C. H. White
W. P. Russell

MARSHALL & WILLIAMS CORP. (212B)
46 Baker St., Providence, R. I.

Features a new high-speed tenter frame equipped with overfeed equipment and the new No. 20 Universal clip, a tensionless batcher, and various types and styles of tenter clips and chain.

Representatives at booth:
R. Viall J. A. Love
J. C. Nash G. H. Curtis
F. H. Land E. E. Ford

MAWACO MACHINE CO., INC. (127aaB)
56 Bogart St., Brooklyn 6, N. Y.

Features the recently developed Jean Guesken 16-jack, three-position head motion for a pile-fabric loom. A single-cylinder decating machine and a rubber-coating machine will be on display.

Representatives at booth:
W. Schlaepfer O. Lepple

METALLIZING CO. OF AMERICA (1015E)
431 E. 75th St., New York 21, N. Y.

Features metallizing equipment, and dot-welding equipment, materials, and supplies.

Representatives at booth:
V. A. Cook W. H. McMakin
M. Gomperts W. W. Allerton

MICRO SWITCH, DIV. OF MINNEAPOLIS-HONEYWELL REGULATOR CO. (839G)
Freeport, Ill.

Features precision switches, including a new sealed limit switch and a new hermetically sealed switch.

Representatives at booth:
J. K. Lincoln G. G. Boyle
K. J. Cumming J. Harrington
A. W. Wacaser G. U. Messner

THE MILLER CO. (68bbF)
Meriden, Conn.

Features fluorescent-lighting equipment for industrial requirements. Included in the exhibit will be a dust- and vapor-tight fluorescent luminaire, a fluorescent luminaire that provides up and down lighting, and a fluorescent luminaire with a new socket box.

Representatives at booth:
H. B. Connell L. A. Kline
F. W. Ogden F. A. Stewart
G. W. Beals C. Maddox
J. B. Proctor P. R. Steele
A. N. Martinson

MILLER WRAPPING & SEALING MACHINE CO. (52C)
18 Clinton St., Chicago 6, Ill.

Features a sheeter with an assembling and wrapping conveyor, an automatic bag-making machine, an automatic bag-labeling and-sealing machine, a rotary bag sealer, and hot plates and hand irons.

Representatives at booth:
R. H. Freeman J. Sylvester
F. Faletti E. E. Messmer

MILTON MACHINE WORKS, INC. (344E)
Box 189, Milton, Pa.

Features all-metal warp beams for broad, narrow-fabric, ribbon, velvet, and carpet looms. Light-metal section beams will also be shown.

Representatives at booth:
J. S. Billig W. D. Leinbach
C. J. Anchor G. W. Blunt

MINNEAPOLIS-HONEYWELL REGULATOR CO. (275C)
Wayne & Windrim Aves., Philadelphia, Pa.

Features a Radiamatic pyrometer, a flow-meter receiver, a new small-case pneumatic thermometer controller, and the new Series 800 diaphragm motor valves with a pressure pilot.

Representatives at booth:
E. Andrews J. J. Horner
A. F. Day J. D. Root
W. A. Munz H. L. Russel
E. J. Klein G. A. Stiftinger
J. A. Whitecraft

MODERN TEXTILES MAGAZINE (272C)
303 Fifth Ave., New York, N. Y.

Features a textile publication.

MORRISON MACHINE CO. (433D)
1171 Madison Ave., Paterson, N. J.

Features a tight-strand washer, an eight-can high-pressure vertical dryer, a rubber-belt compressive-shrinking machine, a standard finishing tenter, a raw-stock dyeing machine, and the Genray process for continuous vat dyeing.

Representatives at booth:
J. L. Morrison D. G. White
J. C. Morrison H. Irano
A. Caporossi K. T. Lendt
J. Kreeft G. R. Weber
H. Lacey W. A. Silby
E. Wenz A. Alomar
D. M. McSpadden
B. Scantland
A. C. Freeman, Jr.
W. D. Heatherington

MORSE CHAIN CO., A Borg-Warner Industry (555F)
7601 Central Ave., Detroit 10, Mich.

Features power-transmission equipment. Cam clutches, torque-limiting clutches, and centrifugal clutches will be shown.

Representatives at booth:
R. J. Howison R. J. Donachie
H. N. Tyler P. W. Vinton
R. B. White J. A. Langan

MOUNT HOPE MACHINERY CO. (370D)
15 Fifth St., Taunton, Mass.

Features a new open-width tension device, a new selvage switch for tenter feeders, a new continuous roll feed, a new Vari-Bow expander, precision guiders, free-wheeling expanders, controlled expansion guides, bowed and skewed weft straighteners, and new selvage uncurlers.

A. B. MURRAY CO., INC. (867G)
Box 476, Elizabeth, N. J.

Features stainless- and carbon-steel textile roll tubing and pipe.

Representatives at booth:
G. H. Root W. Weber
W. G. Gunlack

J. M. NASH CO. (614A)
2360 N. 30th St., Milwaukee 45, Wis.

Features an automatic quill polisher, an automatic bobbin washer, and an automatic feed transfer.

Representatives at booth:
A. Kluge O. Barz

THE NATIONAL DRYING MACHINERY CO. (33A)
Hancock & Lehigh Aves., Philadelphia, Pa.

Features models of various types of dryers.

Representatives at booth:
R. C. Parkes H. O. Kaufman
D. A. Colker J. C. Nihill
H. M. Clark, Jr.
A. M. Zeller, Jr.

NATIONAL RING TRAVELER CO. (31A)
354 Pine St., Pawtucket, R. I.

Features steel and bronze ring travelers for ring spinning and twisting. New gauges for the spinning room will also be shown.

Representatives at booth:
F. L. Chase, Jr. L. E. Taylor
R. V. Borden T. H. Ballard
H. Jones F. S. Beacham
H. A. Carter D. C. Creech
R. M. Leach D. R. Ivester
M. H. Cranford

NATIONAL STARCH PRODUCTS, INC. (315E)
270 Madison Ave., New York 16, N. Y.

Features starches.

Representatives at booth:
I. L. Dowdee D. R. Lassiter
C. A. Dyer F. N. Eastwood
H. C. Olsen E. J. Maslanka
W. H. Stone G. J. Ouellette
H. M. Smith J. F. Fitzgerald

NATIONAL VULCANIZED FIBER CO., INC., FIBER SPECIALTY DIV. (613A)
P. O. Box 311, Wilmington 99, Del.

Features materials-handling equipment, including vulcanized-fibre trucks, Hercules and Dreadnaught trucks, doffing trucks, mill boxes, trays, roving cans, and barrels.

Representatives at booth:
G. G. Reynolds L. Matthews
C. Burns S. Matthews
C. J. Fahey J. C. Berger
R. C. Eisele L. S. Allen
G. H. Ingram R. A. Craig
R. G. Henderson
W. B. C. Plowden
D. E. Williams
J. J. Morris, III

NEW DEPARTURE DIV., GENERAL MOTORS CORP. (425D)
Bristol, Conn.

Features recently developed spindle bearings, ball bearings, sheave bearings, sealed ball bearings, tension-pulley bearings, and other bearings developed especially for the textile field.

Representatives at booth:
R. T. Collins R. D. Brouwer
H. A. Offers W. F. Dunn
J. P. Gillilan M. T. Monich
E. J. Hill R. E. Honeycutt
W. S. Matthews

NEW YORK & NEW JERSEY LUBRICANT CO. (41A)
292 Madison Ave., New York, N. Y.

Features samples of Non-Fluid Oil. A mechanical device illustrating different densities of Non-Fluid Oil grades will be included in the exhibit.

Representatives at booth:
J. H. Bennis H. H. Beaman
W. E. Bierlin D. G. Beaman
A. M. Cowan L. L. Hoyt
R. F. Bagwell E. J. Wood
F. W. Phillips T. W. Feeley
F. W. Winecoff
L. W. Thomason
J. S. Sorrells, Jr.

JOHN P. NISSEN, JR., CO. (710A)
Glenside, Pa.

Features writing tubes and inks for marking textiles.

Representatives at booth:
C. Ford M. A. High

NORCROSS CORP. (400D)
247 Newtonville Ave., Newton, Mass.

Features recording and recording-controlling viscometers and a Sizeometer.

Representatives at booth:
A. S. Norcross F. J. Eimert
R. S. Davis, Jr. R. E. Howell
R. A. Norcross

OAKITE PRODUCTS, INC. (117aaB)
19 Rector St., New York 6, N. Y.

Features new and improved methods and materials for cutting costs on mill-maintenance operations. Displays of stainless-steel reeds and aluminum bobbins before and after cleaning, various models of Oakite steam-detergent guns, and methods of removing scale and rust from equipment and controlling slime and algae in humidifying systems will also be seen at the booth. Copies of "Textile Mill Cleaning Guide" will be available.

Representatives at booth:
E. F. Connolly H. W. Cole
R. E. Tschupp L. T. Prince
T. M. Christley O. J. Lecuyer

PACKAGE MACHINERY CO. (1011E)
Springfield, Mass.

Features a new wrapping machine.

Representatives at booth:
J. J. Kelly G. Woody
T. Jefferson

PANAMERICAN PUBLISHING CO. (372D)
570 Seventh Ave., New York, N. Y.

Features a textile publication.

PARKS-CRAMER CO. (138C)
Fitchburg, Mass.

Features certified climate systems, including an air changer, central-station equipment, Gradumatic humidification, and gradual-acting Psychrostat regulation. Traveling cleaner systems for frames and upper areas of rooms and looms will also be featured.

Representatives at booth:
M. Ford J. F. Crooks
W. E. Buck W. B. Granger
L. F. Ross L. R. Sibley
A. C. Buck W. B. Walker
W. J. Buck C. D. Lee, Jr.
J. R. Henderson

PARKS & WOOLSON MACHINE CO. (610A)
Park St., Springfield, Vt.

Features a vertical high-speed napping machine.

Representatives at booth:
R. F. Hadley S. W. Hall
A. A. Atkinson

PENICK & FORD LTD., INC. (590F)
420 Lexington Ave., New York 17, N. Y.

Features corn starches, dextrines, gums, sugars, and syrups for use in the textile industry.

Representatives at booth:
D. P. O'Connor P. G. Wear
G. M. Anderson W. J. Kirby
H. A. Horan D. F. Lowry
T. N. Nelson

Your Cleaning Problem HERE?
GO get the answer at Oakite Booth 117AA
at the Textile Machinery Show

CLEANING TENTER CHAINS: Oakite Composition No. 92, medium-duty detergent, applied with an Oakite Solution-Lifting Steam Gun quickly and thoroughly removes all soils. Helps minimize cloth contamination, gets better work from chains. Saves time because chains can be completely cleaned in place.

DYE KETTLE CLEANING is simplified by applying Oakite Composition No. 22 with an Oakite Solution-Lifting Steam Gun, pairing speedy detergency with thoroughness to remove all signs of scum and soil.

REMOVING SIZE FROM EQUIPMENT: Troublesome sizing is loosened in short soaking time and suspended in solution, leaving surfaces completely clean, by using Oakite Composition No. 22.

DESCALING HUMIDIFIER SPRAYS: Oakite Compound No. 32, the acidic descalant, scientifically inhibited against attack on metal, thoroughly removes lime scale by dissolving it. Good on nozzles, tanks, return lines—whenever lime scale exists. Also excellent as a rust remover.

REMOVING SLIME FROM SCREENS: Humidifier screens do better work when thoroughly cleaned in quick-penetrating Oakite Composition No. 22. Slime and dirt are thoroughly removed, metal undamaged. Use it also to deslime humidifier tanks, lines.

REMOVING OIL, GREASE FROM EQUIPMENT is fast and thorough with Oakite Composition No. 99 or Oakite Composition No. 12. Efficient operation, less soil removal in finishing processes assured. Fast-working emulsion type detergent, mixable with water, is safe, economical, easy to use. High flash point.

CLEANING PLASTIC SPOOLS, sprockets, spiders and other plastic parts: Oakite Composition No. 63 or Oakite Compound No. 84-M is recommended for this work, choice depending on the kind of deposits to be removed. Both provide fast, safe cleaning action.

REMOVING RUST FROM STEEL REEDS may be done thoroughly and safely with Oakite Compound No. 31. Specially designed material quickly removes rust, light oil and grease.

CLEANING BEFORE REBUILDING MOTORS: Oakite Stripper M-3 removes paint and varnish from coils, windings and cases by soaking. Stator housings, terminals and other parts are easily cleaned in Oakite Composition No. 8. Both detergents are fast working and thorough.

PREVENTING RUST from developing on unprotected surfaces of big or little parts is simplified by applying Oakite Special Protective Oil. It leaves a thin, transparent coating that locks out indoor rust. No pre-drying necessary.

CLEANING ALUMINUM HOSIERY BOARDS may be done without hurting the polished surfaces by using Oakite Composition No. 64. Specialized material has good cleaning and free rinsing qualities, is easy to apply and economical to use.

CONTROL OF SLIME & SCALE IN HUMIDIFIERS and air conditioning units may be accomplished easily by adding Oakite Airefiner No. 52 to the water. This water conditioner stops troublesome slime and scale, helps prevent dry-air damage, gets better service from equipment. May be added to water automatically with Oakite Regulator (provided free.)

FLOOR CLEANING can be greatly simplified by using Oakite Penetrant or Oakite Composition No. 20 to remove grease, starch, lint, size and other soils. Specially designed detergents quickly break the soil binder, rinse off freely, leave surface clean. Materials work effectively used manually or in power scrubbers.

DRY-CLEANING FLOORS: Oakite Composition No. 71, absorbent granular material, soaks up liquids, oils and greases, keeps working areas clean, non-slippery, fire-safe. The material is merely sprinkled around spinning and weaving machinery and swept up.

CLEANING BIG EQUIPMENT before repair or repaint is made much easier by applying Oakite Composition No. 92 or other recommended Oakite material with an Oakite Solution-Lifting Steam Gun. Heat, mechanical force and detergency speedily remove soils, eliminate manual scrubbing.

MATERIALS FOR A MULTITUDE OF JOBS: The textile cleaning jobs that are being successfully performed with Oakite materials literally run into the hundreds. The reason is that Oakite manufactures specialized materials not only for a wide variety of mill maintenance jobs, but also for processing operations such as kier boiling of cotton; wool scouring; and de-oiling of rayon. In all, Oakite provides a group of 102 cleaning and related materials from which you can select the ones best suited to your needs.

Pick up your copy of This FREE Cleaning Guide at Booth 117AA

OAKITE PRODUCTS, INC.

Manufacturers of Specialized Industrial Cleaning Materials

General Offices: 42 Rector St., New York 6, N. Y.
Technical Service Representatives Located in all Principal Cities of the United States and Canada

REG. U. S. PAT. OFF.

In Canada: Oakite Products of Canada Ltd., 65 Front St. E., Tor., Ont.; 1 Van Horne Ave., Mont.; 550 Beatty Street, Vancouver, B. C.

Guide to Exhibitors

PERFECTING SERVICE CO. (26A)
332 Atando Ave., Charlotte, N. C.

Features rotary unions.

Representatives at booth:
R. W. Rousch W. G. Renner
A. J. DeMeyer F. B. Taylor

B. F. PERKINS & SON, INC. (130B)
Holyoke, Mass.

Features rolls, testers, seam and slub detectors, and hydraulic equipment for calenders.

Representatives at booth:
J. L. Perkins, Jr.
B. F. Perkins B. P. Astley
D. S. Perkins C. J. Stevens
C. A. Potter W. J. Garen
T. E. Kane W. Greenwood
E. Norman C. Herder
T. Kavanagh H. Gilliatt
B. Q. Haynes S. Butler

PLATT BROS. (SALES) LTD. (Balcony G)
Oldham, England

Features synthetics-blending machines and a high-draft cotton spinning frame.

Representatives at booth:
B. A. P. Dobson J. L. Coon
E. Bozeman Mr. Shorrocks
J. E. C. Armitage Mr. Morne
H. H. Clinch Mr. Bennion
H. V. Farnsworth Mr. Booth
P. Aitken Mr. Lamb
F. Singleton Mr. Morris

PLUTTE, KOECKE & CO. (852G)
Wuppertal-Barmen, Germany

Features the Hacoba automatic winder for weaving and braiding mills and sewing-thread processors.

Representatives at booth:
D. Rosenkranz

PNEUMAFIL CORP. (829G)
2516 Wilkinson Blvd., Charlotte, N. C.

Features Pneumafil equipment on Whitin, Saco-Lowell, and Davis & Furber spinning frames. Pneumastop equipment will be shown on Saco-Lowell and Whitin roving frames. This equipment will be in the booths of the respective manufacturers.

Representatives at booth:
C. R. Harris J. W. Stuart
G. E. Archer J. A. McCall
J. W. Henderson D. J. Thorp

PRECISION CHROME & FINISHING CORP. (836G)
370 Park Ave., Worcester, Mass.

Features industrial hard chromium plating.

Representatives at booth:
A. B. Brunnell A. H. Brunnell

PROCTOR & SCHWARTZ, INC. (506E)
7th St. & Tabor Rd., Philadelphia, Pa.

Features a new synthetic-fiber card, a preboarding machine, a new loop dryer and curer, a new tenter housing, a Con-O-Matic washer, a fiber-blending system, a loop ager, a continuous open-width steamer, a hot-air slasher, a multipass airlay dryer, an impact dryer for stock, a new continuous bleach system for tubular knit goods, and data on the application of the Redman process.

Representatives at booth:
M. T. Fleming D. Glassford
A. G. Blank G. Clee
H. B. Riehl C. S. Tiers
J. H. Senior W. J. Merrigan
J. Wilson R. M. Gracie
C. W. Schwartz, IV
D. Cunningham
T. A. Mahan
W. H. Poole P. L. Schaffer
J. Franklin J. R. Schenck
E. W. Gehrung J. P. Christ
J. Powischill J. M. Lurwick
E. Hyde H. P. Zayotti
A. Steinruck
G. R. Howard
J. W. Reinhard
C. W. Schwarz, III
W. A. Dickinson, Jr.
T. J. Wilson, Sr.
T. J. Wilson, Jr.

PRODUCT SALES, INC. (19A)
21 Vernon St., Whitman, Mass.

Features the recently developed Cleanalign saddle assemblies and the Sureweight top-roll weight tester. Ball-bearing top rolls for cotton, synthetics, wool, worsteds, and blends, and nonlubricated back-line top rolls will also be shown.

Representatives at booth:
R. K. Butler J. H. Canada
F. H. Cotton R. L. McCauley
L. M. Cotchett D. M. Dunlop
M. O. Thompson

THE PURNELL CO. (364bbD)
111 Lincoln St., Boston, Mass.

Features industrial catalogs.

Representatives at booth:
R. F. Purnell N. G. Graf
F. Purnell D. P. Waite
J. B. Clark D. L. Vickery

ROBERT C. REED CO. (617A)
370 Seventh Ave., New York 1, N. Y.

Features preparatory lags, slats, and pins.

Representatives at booth:
W. E. Macpherson

REEVES PULLEY CO. (313E)
1225 7th St., Columbus, Ind.

Features variable-speed drives and controls. A new wind-up drive and the new auto-pneumatic control for the Reeves Vari-Speed drive will be shown.

Representatives at booth:
I. V. Falk F. Higgins
J. B. Thomas J. A. Mahoney
P. C. Talbot W. J. Reeves
J. H. Gepfert J. P. Reeves

ROBERT REINER, INC. (45C)
550-564 Gregory Ave., Weehawken, N. J.

Features a heavy-duty beaming machine, a permanent pleating machine, creel demonstration sections, and a motion picture of the Famatex-Reiner tendering frame in action.

Representatives at booth:
Dr. R. Reiner G. Moebius
F. Lambach W. Horn
A. Schoenenberg J. Koegler

RELIANCE ELECTRIC & ENGINEERING CO. (362D)
1088 Ivanhoe Road, Cleveland, Ohio

Features electric motors and adjustable-speed drives.

Representatives at booth:
K. S. Lord L. W. Kutz
N. R. Smith E. E. Helm
D. D. Miller P. W. Arnold
A. C. Schettler K. F. Ertell
E. H. Sowers R. L. Custis
A. W. Bridges J. A. Wright
C. E. Robinson

REPUBLIC STEEL CORP. (585F)
3100 E. 45th St., Cleveland, Ohio

Features products made from Enduro stainless steels, titanium, and new plastic pipe.

Representatives at booth:
J. H. Fishel T. E. Perry
S. A. Seckler J. M. McDaniel
R. E. Rowland
W. C. Schnackel
W. J. Resiner

J. E. RHOADS & SONS (352E)
35 N. Sixth St., Philadelphia 6, Pa.

Features textile leathers, including checkstraps, binder leather, bumper straps, end-of-lay straps, condenser tapes, harness straps, heel straps, holdup straps, jack straps, and lug straps. Flat leather belting, rounded leather belting, an automatic tension-controlled leather-belt drive, and a new Tannate binder leather will also be shown.

Representatives at booth:
J. E. Rhoads J. W. Mitchell
P. G. Rhoads L. H. Schwoebel
R. H. Rhoads C. H. Tildes
J. B. Rhoads S. L. Allen
C. R. Mitchell A. S. Jay
W. E. Hubbert J. H. Millar

JOH. JACOB RIETER & CO. LTD. (144C)
Winterthur, Switzerland

See American Rieter Co., Inc.

RIGGS & LOMBARD, INC. (232B)
750 Suffolk St., Lowell, Mass.

Features a stainless-steel continuous washer with rubber-covered main squeeze rolls and a new Free-loop compensator that keeps cloth free from tension and in a relaxed condition.

Representatives at booth:
H. C. Riggs J. W. Malloy
C. J. Lombard H. R. Wilcox
L. T. Parkman

ROTHERM ENGINEERING CO., INC. (847G)
7280 W. Devon St., Chicago 31, Ill.

Features steam, air, and hydraulic revolving joints. Photographs of Rotherm joints as applied to indigo dryer units will be on display.

Representatives at booth:
H. S. Kuhn R. Mack
H. D. Hohm J. N. Kelleher
E. J. Montalvo

B. S. ROY & SON CO. (344aaE)
801 Southbridge St., Worcester, Mass.

Features card-wire grinding machinery, cylinder grinders, and new internal ball-bearing drives and rests.

Representatives at booth:
L. F. Frye W. P. Cooper
T. M. Brockman
H. C. Schwager
D. H. Dewar, Jr.

RUDEL MACHINERY CO. LTD. (449D)
614 St. James St. W., Montreal, Canada

Features a reception booth.

Representatives at booth:
J. M. Rudel
J. E. O'Donnell
A. R. Webster
A. P. Ekstrand

SKF INDUSTRIES, INC. (465D)
P. O. Box 6731, Philadelphia 32, Pa.

Features a new pendulum weighting arm, a ball-bearing top roll, and a ball-bearing tension pulley.

Representatives at booth:
R. H. DeMott C. N. Benson
R. R. Zisette J. O. Cushing
S. H. Smith K. Warberg
A. S. Murray B. F. Davis
E. H. Wagner F. J. Matte
B. K. Lathbury P. W. Dunlap
A. B. Studley
T. W. Morrison

SACO-LOWELL SHOPS (405D, 95aaD)
60 Batterymarch St., Boston, Mass.

Features two new openers, card control rolls, the four-over-five drawing frame, the Model 54 comber, the F-5 roving system, new spinning frames, and the Model 4 twister.

Representatives at booth:
W. K. Dana E. T. Cansler
J. W. Dickert M. A. Comer
U. E. Dubois C. W. Howe
F. Gangitano J. W. Hubbard
J. L. Graves H. J. Jones
W. F. Lowell L. Kuhn
E. J. McVey A. K. Landau
J. L. Truslow J. M. Walker
R. M. Jones H. M. Walsh
J. Rabasa W. R. Wood
F. S. Culpepper
W. S. Baillie, Jr.
W. F. Lowell, Jr.
R. C. Scott
C. S. Smart, Jr.
W. A. Thomason

SAENTIS, INC. (Corridor G)
2911 Summit Ave., Union City, N. J.

See Société Anonyme Adolphe Sauer.

SARCO CO., INC (250B)
350 Fifth Ave., New York 1, N. Y.

Features draining and air-venting system units for drying cylinders. A new thermodynamic steam trap and a new cam-lift bucket trap will be shown.

Representatives at booth:
E. Greene A. Milnes
M. Biggs R. H. Johnson
W. Andrews M. J. Marion
K. A. Abrahamson

C. G. SARGENT'S SONS CORP. (401D)
Graniteville, Mass.

Features a new-design single-apron dryer, a wet and dry picker, and a high-speed cord-maker.

Representatives at booth:
F. S. Smith P. L. Dumigard
R. W. Hall F. E. Wasson
R. A. Lambert A. L. Merrifield
A. G. Forty W. S. Anderson
D. A. Crocker H. Williams

SCHARER TEXTILE MACHINE WORKS (Stage G)
Zurich, Switzerland.

Features automatic pirn winders, a feeler wheel device, hopper and automatic bobbin-loading device, an automatic bobbin-stacking device, a dust cleaner and remover, and a swivel creel.

Representatives at booth:
J. Scharer C. L. Yeomans
E. A. Grimm M. Jent
Mr. Bryce K. Laager

SCHMIDT MFG. CO. (269C)
280-292 North St., New Bedford, Mass.

Features loom and weaveroom equipment, including a rotary automatic reed-cleaning and polishing machine, Steel Spring loom reeds, a synthetic shuttle lining, a new densified picker stick, and improvements in loom strapping, pickers, box-plate coverings, and checkstraps.

Representatives at booth:
C. E. Schmidt R. F. Schmidt
H. E. Schmidt T. Huston

WILLIAM SCHOFIELD CO. (1010E)
219 Krams Ave., Manayunk, Philadelphia 27, Pa.

Features slats. Motion pictures of picker machinery in operation will be shown.

Representatives at booth:
C. R. Davies
Frank J. Tybeskey

SCOTT TESTERS, INC. (40A)
101 Blackstone St., Providence, R. I.

Features the Acer-O-Meter tensile tester and the Clemson fiber-bundle tester.

HOLDSWORTH
Top Quality Features:

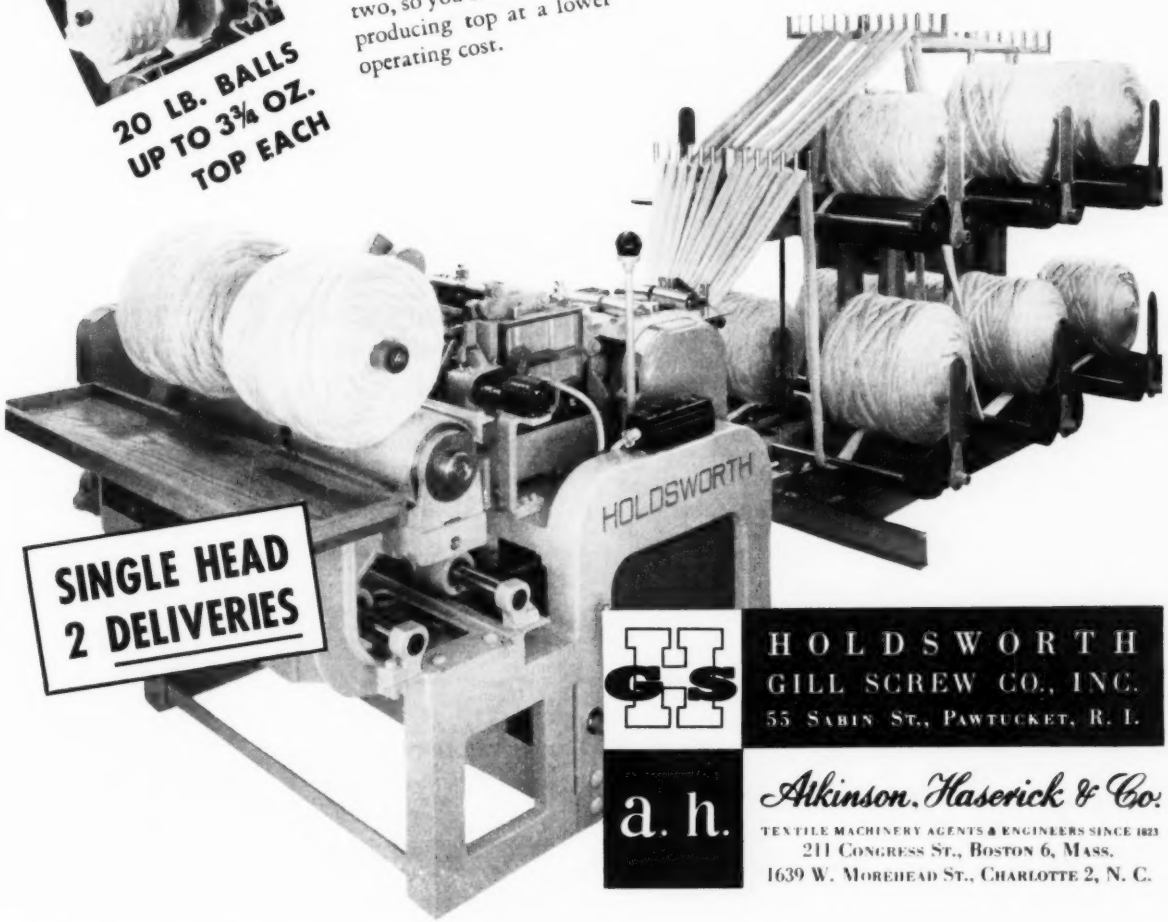
LOWER FRAME With the front and drawing off rolls of the new Holdsworth Balling Head Gill Reducer exposed to view at a height of only 41", the top in process is visible at a glance. An operator seeing the progress of every end, experiences less tension and handles more work.

LOWER MAINTENANCE Holdsworth parts are interchangeable and require no fitting. Simplicity of design reduced the number of parts and low, open construction makes them accessible for cleaning.

This Gill Reducer was developed by worsted men at the Holdsworth Gill Screw Co., America's oldest maker of gilling machinery. In conjunction with Atkinson, Haserick & Co., we offer a complete and unequalled service for all worsted or worsted type operations. May we serve you?

LOWER COST By taking two sets of ends through one head, maximum use is made of the machinery. One head costs less than two, so you conserve capital while producing top at a lower operating cost.

20 LB. BALLS UP TO 3¾ OZ. TOP EACH



SINGLE HEAD 2 DELIVERIES

H G S

HOLDSWORTH
GILL SCREW CO., INC.
55 Sabin St., Pawtucket, R. I.

a. h.

Atkinson, Haserick & Co.
TEXTILE MACHINERY AGENTS & ENGINEERS SINCE 1823
211 Congress St., Boston 6, Mass.
1639 W. Morehead St., Charlotte 2, N. C.

Guide to Exhibitors

SEYDEL-WOOLLEY & CO. (918G)
748 Rice St., N. W., Atlanta, Ga.
Features the Niagara yarn-conditioning machine and an over-waxing roll that was recently developed.
Representatives at booth:
V. Woolley W. H. Cutts
J. R. Seydel V. R. Mills
Dr. P. V. Seydel F. deLoach
D. Meriwether
W. L. Whisnant
A. W. LaGrone

SHELL OIL CO. (356aaE)
50 W. 50th St., New York, N. Y.

SILL INDUSTRIES (4A)
187 Maplewood Ave., Maplewood, N. J.
Features electric radiant-heating panels for resin curing, gas radiant-heating panels for drying and curing, gas-fired generators for ovens and cure boxes, Carbomatic Pyro-Jet, and Carbomatic Una-Ray heaters.
Representatives at booth:
H. N. Bross B. J. Lyster
T. F. Walsh C. S. Na
J. A. Bianco C. Grant

THE SIMCO CO. (616A)
920 Walnut St., Lansdale, Pa.
Features static eliminators. A new shockless static bar and a new static eliminator that is effective at distances of a foot or more will be on display.
Representatives at booth:
J. Simons H. Schweriner
W. Rowedder D. Simons

SIMPLEX PACKAGING MACHINERY, INC. (52C)
534 23rd Ave., Oakland 5, Calif.

SIPP-EASTWOOD CORP. (809G)
35 Farrand St., Bloomfield, N. J.
Features a direct warper.
Representatives at booth:
W. J. Behr, Jr. O. Biegel
H. W. Ruddick J. H. Fleming

SMITH, DRUM & CO. (55E)
432 W. Allegheny Ave., Philadelphia, Pa.
Features dyeing, drying, and extracting equipment.
Representatives at booth:
H. S. Drum A. Hagian
R. N. Smith R. W. Foltz
W. C. Dodson A. P. March
W. Fuchswanz
Parrott & Ballentine (Southern representatives)

JAMES SMITH & SON, INC.
982 Southbridge St., Worcester 3, Mass. **(317E)**
Features units relating to Noble combing of wool and synthetics.
Representatives at booth:
W. E. Christensen
J. J. Sandy

SOCIETE ALSACIENNE DE CONSTRUCTIONS MECANIQUES (Corridor G)
Mulhouse, France
Features a new high-draft spinning frame and a cone gill reducer.
Representatives at booth:
J. F. Berry J. L. Coon
G. Bliss H. Slater
H. V. Farnsworth

SOCIETE ANONYME ADOLPHE SAURER (CorridorG)
Arbon, Switzerland
Features a high-speed, single-shuttle automatic loom and a four-shuttle pirn-changing loom.
Representatives at booth:
Dr. S. Remy
F. Forrer

SONOCO PRODUCTS CO.
Hartsville, S. C. **(71F)**
Features cones, tubes, cores, spools, cots, and bobbins. New products made by the Duro-weld process and new plastic single-head spools will be shown.
Representatives at booth:
C. H. Campbell W. R. Peacock
J. A. Reagan, Jr.
W. B. Broadbent
W. M. Carpenter
W. K. Lewis, Jr.
P. F. Williams O. Fayne
A. H. Gildersleeve
G. K. Lewis E. J. Cotter
H. P. Lamarache
O. D. Duckett C. A. Burnham
W. R. Gray W. H. Hillsgrove

SOUTHERN TEXTILE NEWS (815G)
Piedmont Bldg., Charlotte, N. C.
Features a textile publication.

SOUTHWELL TEXTILE MACHINERY RESEARCH CORP. (1003F)
North Chelmsford, Mass.
Features the Southwell sizer.
Representatives at booth:
D. Duggan R. Leslie, Jr.

SPAULDING FIBRE CO., INC. (1018E)
310 Wheeler St., Tonawanda, N. Y.
Features a new bobbin for synthetic yarns, headless-package tubes, separator blades, lap rolls, pirn caps, binder pins, bobbin heads, sizing tubes, lug straps, and take-up bobbins and tubes.
Representatives at booth:
R. D. Marsh R. A. Morgan
J. E. Miner

STANDARD PRESSED STEEL CO. (606A)
Stewart & Kenmore Aves., Jenkintown, Pa.
Features, new steel shuttle tips. Socket-head cap screws, button-head screws, self-locking socket and square-head set screws, and self-locking nuts will be shown.
Representatives at booth:
J. J. Wiest J. E. Harkins
J. W. Hattersley, Jr. W. Tait

STEEL HEDDLE MFG. CO
2100 W. Allegheny Ave., Philadelphia 32, Pa. **(365D)**
Features flat steel heddles, harness frames, reeds, shuttles, drop wires, Drawtex heddles and frames, and warp-preparation equipment.
Representatives at booth:
V. C. Hassold H. W. Fehr
J. J. Kaufmann, Jr.
J. J. Kaufmann, Sr.
Frank H. Kaufmann

STELLITE AMERICAN CORP, (806G)
60 E. 42nd St., New York 17, N. Y.
Features a high-speed pin drawer, pneumatic cleaners, a filter box, aluminum ducts, the new Rotaflyer, the new Card-Tho-Mat, a fiber-length measuring machine, and an atlas of blends.
Representatives at booth:
H. P. Levy V. Saxl
E. Reynaud H. Berberich.

STELLITE, MILANO (806G)
See Stellite American Corp.

STERLING ENGINEERING & MFG. CO. (364aaD)
173 Gilligan St., Wilkes-Barre, Pa.
Features a self-stacking bobbin; cone, tube, and quill boards made of cadmium-plated steel and stainless steel; aluminum quill boards and yarn-handling trucks. New self-stacking tube boards with a flexible holder for yarn shrinkage will also be on display.
Representatives at booth:
G. McGee

STEWART-WARNER CORP., ALEMITE DIV. (355E)
1826 Diversey Pkwy., Chicago 14, Ill.
Features lubrication equipment. The Oil-Mist system of lubrication and Type No. 1 accumeter lubrication equipment will be shown.
Representatives at booth:
A. Courtois M. Smith
J. Esbenshade

SYKES, INC. (450D)
70 Needham St., Newton Highlands, Mass.
Features card clothing.
Representatives at booth:
C. E. Mason T. Pogson
R. Hesmondhalgh
R. J. Walker C. P. Merrill
N. B. Crowther R. Denico

SYNTHANE CORP. (587F)
Oaks, Pa.
Features a large-size laminated-plastic redraw cap, a one-piece redraw cap, a new collapsible bobbin, standard bobbins, rayon cake holders, verge plates, hosiery examining forms, nonsagging redraw caps, headless-package tubes, sizing bobbins and caps, and piping for nylon sizing machines.
Representatives at booth:
R. R. Titus
E. E. Smith R. B. Galloway
H. Widdop D. Garrison
J. K. Johnson O. L. Smith
C. B. Moss M. B. Firehock

TAYLOR INSTRUMENT COS. (551F)
95 Ames St., Rochester, N. Y.
Features control and measuring instruments, including flow recorders and controllers, process timers, schedule controllers, flow transmitters, liquid-level controllers, load recorders, temperature and pressure gauges, and industrial thermometers. A new differential-pressure transmitter for a package- and beam-dyeing control system will also be shown.
Representatives at booth:
H. Olson J. S. Detwiler
F. S. Ward R. J. Brannigan
A. J. Fleig J. E. Anderson

G. H. TENNANT CO. (870G)
2586 N. Second St., Minneapolis 11, Minn.
Features floor-maintenance techniques, including hardwood finishes, a concrete hardener, and a concrete floor seal. A new power sweeper and a new scissors-action mop will also be shown.
Representatives at booth:
O. C. Hognander
G. D. Billings W. Emerson
R. Lindboe P. Manfra
R. Crickmer A. H. Jackson

THE TERRELL MACHINE CO. (277C)
3000 S. Boulevard, Charlotte, N. C.
Features cleaning machines, bobbin conveyors, a bobbin box hoist, and pickers.
Representatives at booth:
J. F. Notman J. R. Hartmann
M. H. Ridenhour
W. S. Terrell J. E. Scott
E. T. Gavin P. A. Sloope

THE TEXAS CO. (345E)
135 E. 42nd St., New York 17, N. Y.
Features textile lubricants.
Representatives at booth:
J. J. Clark W. P. Warner
G. B. Maupin J. M. Hackney
C. W. Meadors A. R. Dunphy
C. T. Hardy A. H. Baker
F. M. Edwards F. Reich
H. E. Meunier L. M. Smith

TEXPLANT CORP. (1007E)
65 Bedford St., Stamford, Conn.
Features roller-bearing spindles for spinning and twisting frames, change-over parts for converting frames to high draft, and spinning and twister rings.
Representatives at booth:
A. J. Lindell W. Hornberger
J. A. Olwell M. Bergner

TEXTILE AGE (348aaE)
22 W. Putnam Ave., Greenwich, Conn.
Features a textile publication.

TEXTILE BULLETIN (88F)
218 W. Morehead St., Charlotte, N. C.
Features a textile publication.

TEXTILE EQUIPMENT CORP. (601A)
619 Rutherford St., Greenville, S. C.
See W. D. Dodenhoff Co., Inc.

TEXTILE INDUSTRIES (451D)
806 Peachtree St., N. E., Atlanta, Ga.
Features a textile publication.

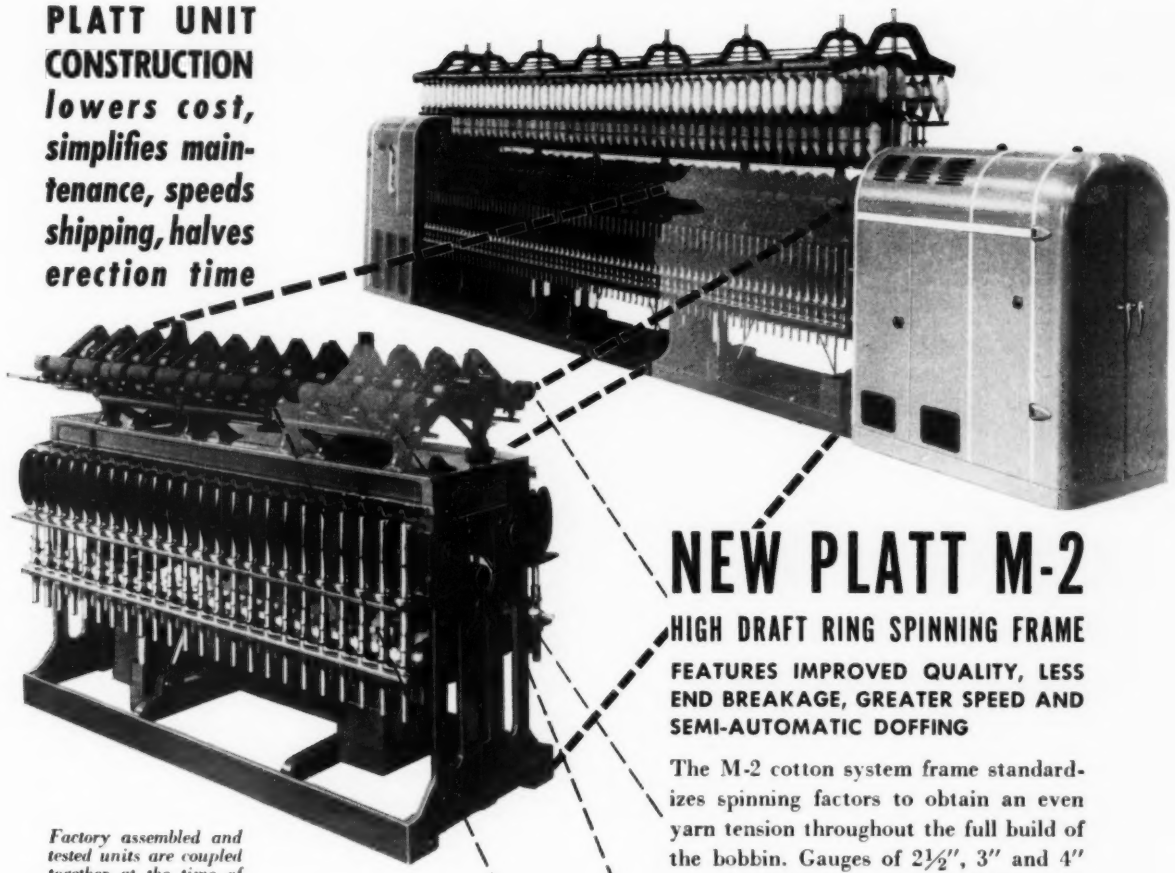
TEXTILE WORLD (357aaD)
330 W. 42nd St., New York 36, N. Y.
201 E. Coffee St., Greenville, S. C.
Features a textile publication.
Representatives at booth:
E. D. Fowle W. B. Dall
P. M. Thomas T. Macaluso
J. H. Kennedy J. P. Ryan, Jr.
J. H. Blore H. J. Bernard
M. London A. W. Fisher
P. B. Pressley J. C. White, Jr.
T. B. Winston H. C. Harvey
D. H. White J. G. Sabella
M. C. MacKenzie
R. L. Chisholm
W. G. Ashmore

TEXTUBE CORP. (1009E)
65 Bedford St., Stamford, Conn.
Features paper spinning tubes and paper and wood quills; paper and wood roving bobbins.
Representatives at booth:
A. J. Lindell W. Hornberger
J. A. Olwell M. Bergner

TON-TEX CORP. (43A)
31 Columbus Ave., Englewood, N. J.
Features transmission and conveyor belting and loom and harness strapping.
Representatives at booth:
J. S. Meyers F. A. New
T. A. Lombardi D. R. Sellars
A. N. Alexander
R. E. L. Holt, Jr.

TOWER IRON WORKS (906G)
50 Borden St., Providence, R. I.
Features a flash ager, a driven scray, a padder, and a stainless-steel vat and acid ager.
Representatives at booth:
W. W. Smith F. C. Bird
H. T. Prince L. A. Prescott
R. H. Scott

PLATT UNIT CONSTRUCTION *lowers cost, simplifies maintenance, speeds shipping, halves erection time*



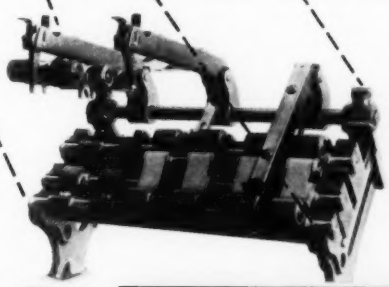
Factory assembled and tested units are coupled together at the time of erection

NEW PLATT M-2

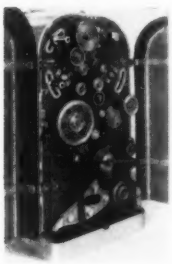
HIGH DRAFT RING SPINNING FRAME

FEATURES IMPROVED QUALITY, LESS END BREAKAGE, GREATER SPEED AND SEMI-AUTOMATIC DOFFING

The M-2 cotton system frame standardizes spinning factors to obtain an even yarn tension throughout the full build of the bobbin. Gauges of 2½", 3" and 4" are provided for rings of 1¾" to 3" diameter, with lifts from 5" to 12".



THE NEW PLATT TOP APRON drafting system is neat, clean and uncomplicated. It is highly flexible with only minor adjustments. Yarn spun with a draft of up to 50 is equal in strength and regularity with yarn spun with lower drafts. A short apron, working over a large second line bottom roller, holds the fibers in a definite path as they are not subjected to the undulations of two aprons. The Pneumafil System is built into each unit.



HEADSTOCK houses the twist and draft gearing, all mechanical and electrical controls and the builder motion that is self-acting, not requiring resetting on the completion of the packages.

PLATT BROS.

SALES LTD. OLDHAM, ENGLAND

a. h. *Atkinson, Haserick & Co.*

TEXTILE MACHINERY AGENTS & ENGINEERS SINCE 1823

211 CONGRESS ST., BOSTON 6, MASS.

1639 W. MOREHEAD ST., CHARLOTTE 2, N. C.

DOFFING IS SEMI-AUTOMATIC as individual motors automatically set-up the frame for doffing. The operator just replaces the full package with an empty bobbin or tube. How many man-hours could this conserve in your mill?

Guide to Exhibitors

TRANTER MFG., INC., PLATECOIL DIV. (903G)
735 E. Hazel St., Lansing 4, Mich.

Features heat-transfer units for all types of process heating and cooling applications.

Representatives at booth:
J. R. Tranter, G. B. Duff, J. R. Tepfer, G. S. Ewing, C. P. Yoder, W. H. Eckhard, S. J. Stowell, S. L. Huyette, C. W. Loree, W. C. Edge, Mrs. L. S. Worthington, M. P. Edge, P. I. Wood, G. M. Phillips, W. R. Kirby, A. W. Anderson, W. J. Mock, V. M. Smith, Jr., G. Moynihan, C. E. Johnson, F. L. Bridges, W. B. Parsons, Jr.

TRUMETER CO. (612A)
1265 Broadway, New York 1, N. Y.

Features counting and measuring devices. To be shown for the first time are the Trumeter automatic motor-driven reset instrument and the MAAG selvage printing machine. The new Trumeter stylus will also be shown.

Representatives at booth:
E. Seligmann, E. Slaughter, H. O. Jacobus, F. Slaughter, T. Huston, J. H. Aydelette, H. E. Linderson, G. M. Westwater

TURBO MACHINE CO.
Lansdale, Pa. (16ccA)

Features a new tow stapler.

TWIN DISC CLUTCH CO.
Racine, Wis. (706A)

Features a new loom let-off; a new air-actuated loom clutch; an improved and redesigned Hydro-Wynd drive.

Representatives at booth:
E. H. Bennett, R. E. Walsh

U S BOBBIN & SHUTTLE CO. (360D)
135 Bradford St., Lawrence, Mass.

Features bobbins, silk quills, roving, skewers, spools, rolls, cones, rings, shields, drivers, ferrules and bushings with tips, shuttles, and warper beams. Plastic shuttles, spools, and warper beams are among the newly developed equipment to be on display.

Representatives at booth:
C. D. Brooks, E. W. Nash, R. S. A. Simmons, L. Boucher, A. D. Roper, R. Boucher, C. W. Hite, J. C. Fulling, P. McLeod, R. E. Stevens, J. Locke, M. L. Johnston

U. S. HOFFMAN MACHINERY CORP. (611A)
105 Fourth Ave., New York, N. Y.

Features a multistage centrifugal blower.

Representatives at booth:
R. L. Stephenson, A. J. Kroog, R. Boyd, Jr., C. King, E. Massala, T. Kinraide, P. Morgan, E. H. Parker

U. S. TEXTILE MACHINE CO. (124B)
411 Gilligan St., Scranton, Pa.

Representatives at booth:
J. B. Kingsley, P. J. Thomas, A. W. Thomas, Jr., C. Nave, V. A. Schiffer, F. F. Gubitose, S. E. Stahller, R. Williams

UNIVERSAL WINDING CO. (165C, 276C)
P. O. Box 1605, Providence 1, R. I.

Features winding and twisting machinery. A new high-speed vertical redrawing machine and a new 9-in.-traverse ring twister that is equipped to wet-twist cotton yarn will also be shown.

Representatives at booth:
R. Leeson, T. L. Cotter, E. O. Smith, L. E. Ffrench, W. S. Warren, H. H. Richardson, W. L. Paulhamous, F. P. Barrie, W. J. Quinn, F. J. Barrows, J. W. Stribling, J. R. Breen, J. A. Nasmith, H. D. Kernan, J. F. Ernoult, E. C. Parish, J. B. Brun
Personnel from the W. J. Westaway Co. Ltd.

USTER CORP. (825G)
2516 Wilkinson Blvd., Charlotte, N. C.

Features an evenness tester; a linear integrator and the quadratic integrator, sliver-lap unwinding device, an automatic slub-counting attachment, and a Spectrograph, all for use with the evenness tester; lap Varimeters with Varisignal units, an automatic yarn-strength tester with a multiple bobbin attachment, three models of the Uster warp-tying machine, the new Schlumberger analyzer, the Projectina, and the new Servo-Fibrograph will be shown.

Representatives at booth:
C. B. Bookout, A. E. Cutting, H. Winiger, A. Schuler, B. E. Sweet, W. B. Floyd

VAN VLAANDEREN MACHINE CO. (503E)
370 Straight St., Paterson 3, N. J.

Features a constant-speed tuber; a two-roll pneumatic embosser; a combination examiner and tubing machine with an automatic selvage guide; a pneumatically operated two-roll padder; a constant-speed, tensionless, automatic Dye Master jig; a three-roll combination rolling and friction hydraulic calender.

Representatives at booth:
G. H. Van Vlaanderen, G. Van Vlaanderen, C. Van Vlaanderen, G. Ricca, A. Barbera

VEEDER-ROOT, INC. (264B)
70 Sargent St., Hartford, Conn.

Features pick and hank counters, cut meters, and a predetermining magnetic counter for use on all types of machinery. A redesigned line of multiple-shift counters and the new Vary-Tally multiple-reset counters for use in different sections of the mill will also be on display.

Representatives at booth:
A. E. Kallinich, R. C. Conant, G. L. Logan, W. T. Heydt, T. Nelson, R. G. Perfect, W. Brooks, F. J. Swords, H. E. Mansfield, R. E. Walker

VICKERS, INC. (711A)
1400 Oakman Blvd., Detroit 32, Mich.

Features oil hydraulic piston pumps, piston motors, and transmissions.

Representatives at booth:
F. T. Harrington, E. J. Doucet, R. E. Esch, M. R. Tyson, E. O. Clark

VICTOR RING TRAVELER CO. (254B)
20 Mathewson St., Providence, R. I.

Features a reception booth.

Representatives at booth:
E. R. Jerome, W. T. Horton, B. H. Waterman, C. H. Green, E. L. Connor, W. L. Hudson, E. Cranshaw, C. W. Wilbanks, F. P. Bodenheimer

VIRGINIA-CAROLINA CHEMICAL CORP., FIBER DIV. (885G)
500 Fifth Ave., New York, N. Y.

Features Vicara in both fiber and Vicara-blended fabrics. A new highly crimped fiber will also be shown.

Representatives at booth:
J. H. Karrh, L. Billings, J. F. Yeates, Jr., A. Koos, R. Hagner, A. Amatruda

WALTON LABORATORIES, INC. (266C)
1186 Grove St., Irvington, N. J.

Features industrial, commercial, and package humidity systems and humidity controls and indicators.

Representatives at booth:
W. Felderman, H. Puttbach, J. Felderman, R. C. Link, J. R. Lewis

WARNER ELECTRIC BRAKE & CLUTCH CO. (855G)
Beloit, Wis.

Features electric clutches and brakes.

Representatives at booth:
N. K. Anderson, W. Timmcke, P. E. Myers, A. Stewart, R. H. Brown, R. F. Edgar

WARNER & SWASEY CO.
5701 Carnegie Ave., (294C, 48C)
Cleveland 3, Ohio

Features the Pacific converter and Sulzer weaving machines.

Representatives at booth:
E. R. Gardner, C. Christiansen, H. P. Balsom, O. Kelly, E. L. Vaughn, H. K. Jennings, G. M. Phoenix, T. L. Stilwell

WATSON-WILLIAMS MFG. CO. (582F)
Millbury, Mass.

Features shuttles and shuttle parts.

Representatives at booth:
W. L. Watson, S. M. Ebert, H. J. Watson, J. Wyatt, R. E. Norman, A. J. Bahan, G. C. Burbank

WAUKESHA FOUNDRY CO.
Waukesha, Wis. (429D)

Features nickel-alloy and stainless-steel positive-displacement pumps for sizing, dye, and similar products. Nickel-alloy and stainless-steel castings will also be featured.

Representatives at booth:
E. M. Howe, R. R. Watt, J. Weaver, C. E. Schick

WERNER MACHINE CO., INC. (120B)
183 Autumn St., Passaic, N. J.

Features a 120-in. tricot and lace resin-finishing pad; a 50-in. deep-pattern embossing calender with an inlay printing and top-tipping attachment; a constant-speed, heavy-duty, stainless-steel dye jig for 36-in. rolls; a constant-speed cloth-inspection machine; and automatic suction slot sealers.

Representatives at booth:
W. P. Rose, R. E. Kuhn, A. R. Gessinger

WERNER TEXTILE CONSULTANTS (86F)
60 E 42nd St., New York 17, N. Y.

Features a reception booth. A three-dimensional layout of a medium-size textile mill will be on display at the booth.

Representatives at booth:
H. L. Werner, J. C. Werner, R. M. Ashner, S. I. Rudo, J. P. Mills, P. Stokes

WEST POINT FOUNDRY & MACHINE CO. (574F)
West Point, Ga.

Features literature on slashers, corduroy-cutting machines, cross brushers, treadle brushers, and size kettles.

Representatives at booth:
T. J. Lane, R. F. Guill, R. L. Mundhenk, S. S. Rice

WESTINGHOUSE ELECTRIC CORP. (95D)
511 Wood St., Pittsburgh, Pa.

Features gearmotors, motor starters, a slasher drive, a Preciptron air cleaner, fans, blowers, transformers, and Micarta.

Representatives at booth:
C. P. Walker, F. T. Benner

WHITIN MACHINE WORKS (24A 180C, 289C)
Whitinsville, Mass.

Features the Roto-Drafter, a new high-speed fully automatic winder, a roving frame, and a spinning frame for cotton and staple synthetics, a new wool spinning frame, a heavy-duty high-speed uptwister for tire cords, a direct spinner, and repair and replacement parts.

Representatives at booth:
J. H. Bolton, R. J. McConnell, J. H. Bolton, Jr., H. Moss, B. B. Peacock, R. I. Dalton, R. W. Dunn, R. A. Hargreaves

THE WIESNER-RAPP CO., INC. (866G)
1600 Seneca St., Buffalo 10, N. Y.

Features wet-end and drying textile machinery and equipment. Laboratory models of the Du Pont Barotor and a three-roll padder will be shown.

Representatives at booth:
W. W. Arnold

W. W. WINDLE (884G)
Millbury, Mass.

Features a frame bagger and waste-cotton device.

WINSOR & JERAULD MFG. CO. (100D)
1268 Eddy St., Providence, R. I.

Features tenter clips, high-speed tenter frames, and tenter-frame accessories. A new high-speed tenter clip and a new heavy-duty tenter frame will be included in the exhibit.

Representatives at booth:
E. Wharmby, C. C. Keyworth, M. M. Zuck, E. H. Olausen, A. J. Cole

WOONSOCKET NAPPING MACHINERY CO. (118B)
355 Orchard St., Woonsocket, R. I.

Features finishing machinery.

Representatives at booth:
P. Malay, J. St. John, A. McGoldrick

WRIGHT-BATCHELDER CORP. (838G)
10 High St., Boston 10, Mass.

Features Shepherd patented casters.

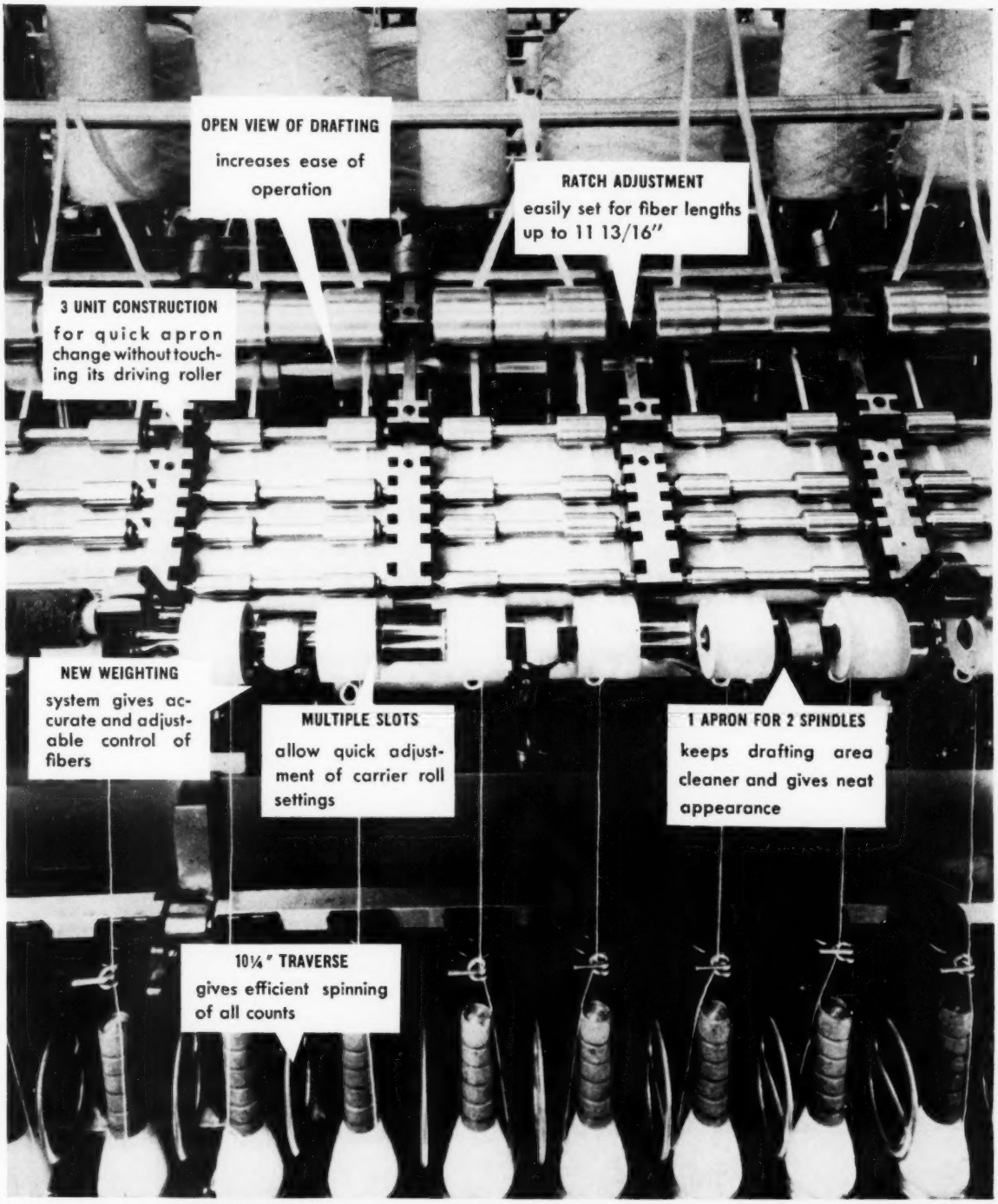
Representatives at booth:
C. F. Batchelder, Jr., P. Cook, J. B. Richmond

WRIGHT MACHINERY CO.
Durham, N. C. (703A)

Features a tester that predicts the nep-forming behavior of cotton in processing.

YEOMANS TEXTILE MACHINERY CO. (Stage G)
Spartanburg, S. C.

See Scharer Textile Machine Works.


OPEN VIEW OF DRAFTING
increases ease of operation
RATCH ADJUSTMENT
easily set for fiber lengths up to 11 13/16"
3 UNIT CONSTRUCTION
for quick apron change without touching its driving roller
NEW WEIGHTING
system gives accurate and adjustable control of fibers
MULTIPLE SLOTS
allow quick adjustment of carrier roll settings
1 APRON FOR 2 SPINDLES
keeps drafting area cleaner and gives neat appearance
10¼" TRAVERSE
gives efficient spinning of all counts

NEW SACM SPINNING FRAME PRODUCES

FINE QUALITY YARNS FROM TWISTED OR UNTWISTED ROVING

The new SACM drafting system controls the widest range of various types and lengths of fibers, with drafts up to 22. This is the most modern of frames with emphasis on simplified parts, operation and maintenance. The operator has an unobstructed view of the drafting element and a constant tachometer check on spindle and front roll speeds. If you are spinning worsted type yarns, synthetics or blends, we will be very glad to send you more information and quote prices on these highly versatile frames.

SACM

SOCIETE ALSACIENNE
DE CONSTRUCTIONS MECANIQUES
MULHOUSE, FRANCE

a. h.

Atkinson, Haserick & Co.
TEXTILE MACHINERY AGENTS & ENGINEERS SINCE 1823
211 CONGRESS ST., BOSTON 6, MASS.
1639 W. MOREHEAD ST., CHARLOTTE 2, N. C.

 For more information, write direct or use Reader Service post card.

Alexander Smith

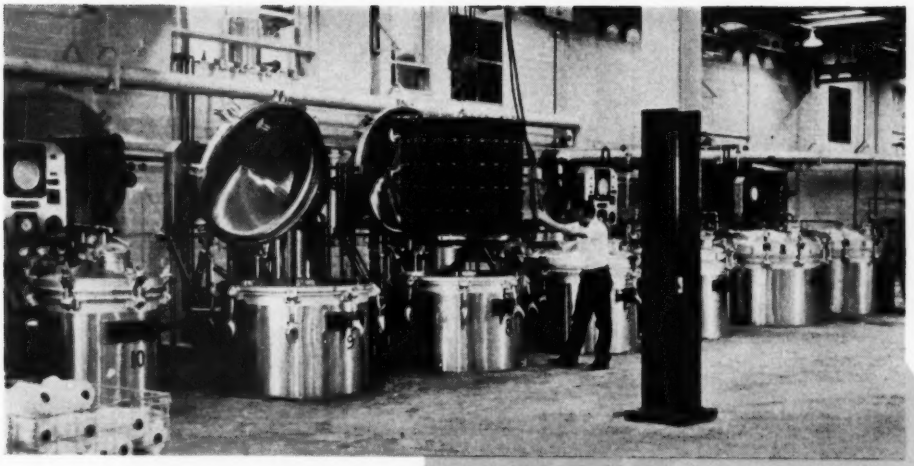
The First Name and the Last Word in Carpets!

LEADS AGAIN WITH THE MOST MODERN INSTALLATION FOR DYEING, EXTRACTING AND DRYING EQUIPMENT

Battery of 100-2000 lbs. Package Dyeing Units with High Speed Pressure Extractors and Port Dryers.

Stienen
Trade Mark

Obermaier
(Reg. Trade Mark)



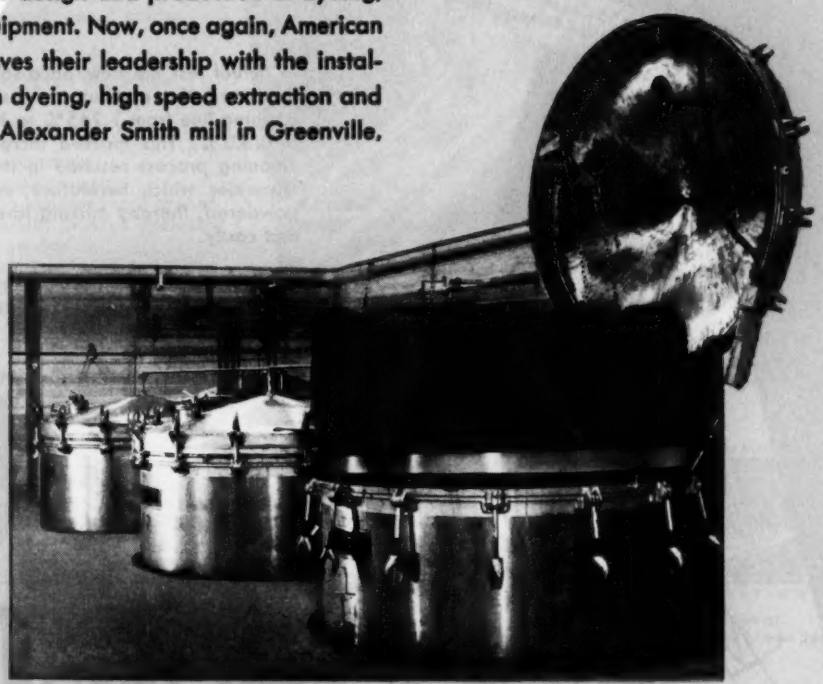
Battery of 100-2000 lbs. Package Dyeing Units.

designed and produced by

American Standard Fabricators Corp.

New York 51, N. Y.

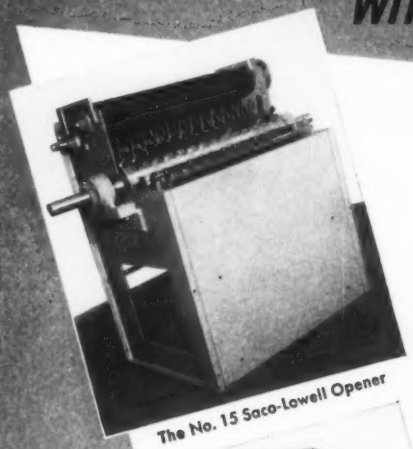
For more than half a century, the Stienen-Obermaier system has led the industry in the design and production of dyeing, extracting and drying equipment. Now, once again, American Standard Fabricators proves their leadership with the installation of the most modern dyeing, high speed extraction and drying equipment at the Alexander Smith mill in Greenville, Mississippi.



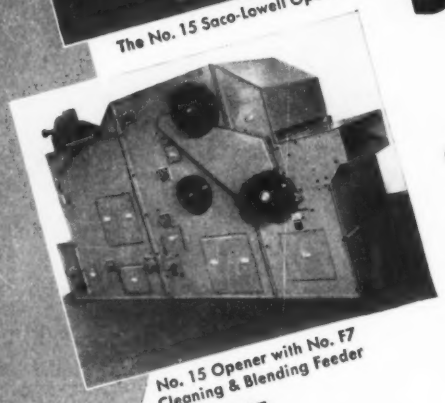
Battery of 1000-4000 lbs. Wool and Synthetic Raw Stock Units.

Our technical service is available at all times without obligation

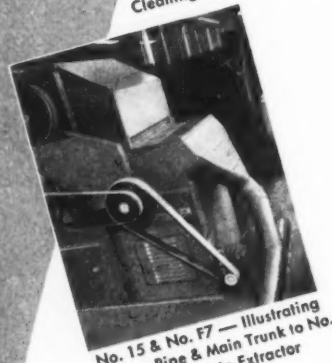
INCREASE THE EFFICIENCY OF YOUR OPENING ROOM WITHOUT EXTRA OPERATING COST



The No. 15 Saco-Lowell Opener



No. 15 Opener with No. F7 Cleaning & Blending Feeder



No. 15 & No. F7 — Illustrating Connecting Pipe & Main Trunk to No. 11 Dust & Waste Extractor

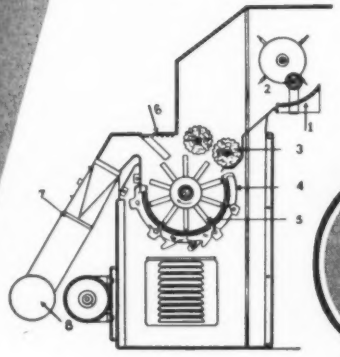
with the NEW SACO-LOWELL No. 15 OPENER

- REMOVES BROKEN LEAVES, STICKS & HEAVY IMPURITIES
- IMPROVES BLENDING
- PRODUCES FLUFFY, COMPLETELY OPENED STOCK BETTER PREPARED FOR PROCESSING BY OTHER OPENING LINE MACHINES

In *actual test* the new Saco-Lowell No. 15 Opener increased the amount of waste extracted by the opening line from 1.245% to 1.560%, an increase of 25.3%. This marked increase during the first cleaning process resulted in the removal of heavy impurities which heretofore were broken up and powdered, thereby making later extraction difficult and costly.

Increased cleaning in the opening line can be attained with the installation of the Saco-Lowell No. 15 Opener.

A *technical bulletin* describing the new Saco-Lowell No. 15 Opener is *available on request.*



1. Steel Bar Cleaning Grid
2. Steel Doffer
3. Wooden Delivery Rolls
4. Adjustable Grid Bars
5. The No. 15 Beater
6. Louvres for Air Intake
7. Connecting Pipe to Main Trunk
8. Main Trunk to No. 11 Dust and Waste Extractor

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

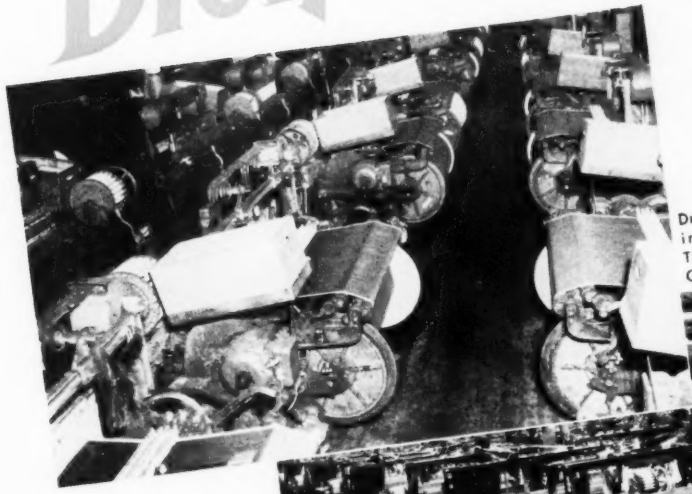
For more information, write direct or use Reader Service post card.

Diehl

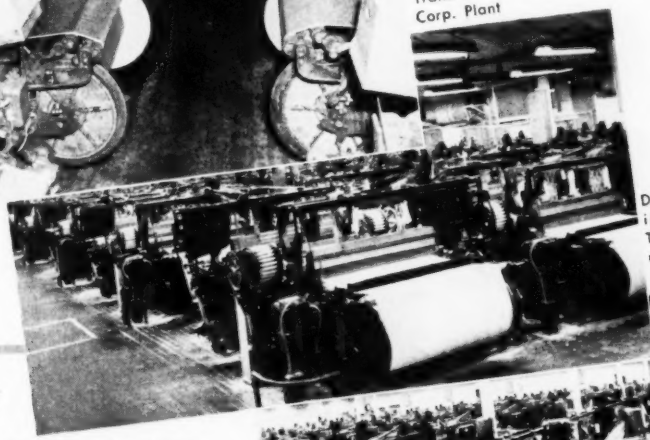
POWER TRANSMITTER

is assuring maximum weaving efficiency in leading mills

Thousands of Diehl Power Transmitters are operating DRAPER LOOMS in leading textile mills. Many have been in continuous operation for five years.



Draper X2 looms operating with Diehl Power Transmitters in Cone Mills Corp. Plant



Draper XD looms operating with Diehl Power Transmitters at Bibb Manufacturing Company, Columbus, Georgia.

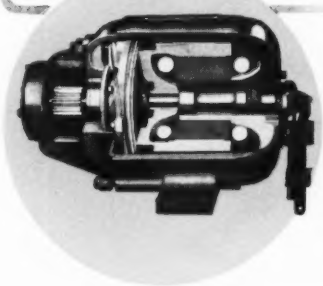
Draper XD looms operating with Diehl Power Transmitters at the Lyons Plant, Synthetic Division, M. Lowenstein and Sons.

MILL MEN ARE ENTHUSIASTIC ABOUT THESE FEATURES

- "Stored energy" for smooth, rapid starts and positive picking
- Precision braking.
- Minimum fluctuations of speed and motor current.
- Lower power consumption.
- Lower motor heat losses.
- Eliminates current regeneration.
- Simplicity and ease of maintenance.

. . . all of which adds up to increased mill production, improved quality of cloth, lowered operating costs and long, trouble-free service.

We will welcome an opportunity to tell you—without obligation—how the Diehl Power Transmitter can bring these benefits to you.



This cutaway view illustrates the inverted construction of the power transmitter and shows the rotor which revolves around the outside of the stator on a hollow shaft—providing the essential inertia without the disadvantages of a separate fly wheel. Note the pinion driving shaft with attached clutch-plate which is shifted axially by simple lever at front end of motor, regulating clutch engagement pressure and providing controlled driving and braking action.

TEXTILE MACHINERY AMERICAN ASSOCIATION ATLANTIC CITY APRIL 26-30 1954 EXHIBITION

Visit us at BOOTHS 259, and 260.

DIEHL MANUFACTURING COMPANY

Electrical Division of THE SINGER MANUFACTURING COMPANY

Finderne Plant, SOMERVILLE, NEW JERSEY

ATLANTA • BALTIMORE • BOSTON • CHICAGO • DETROIT • NEW YORK • PHILADELPHIA • WORCESTER

Put Bahnson in your PLANS...

...for peak profits in your plants!

Increased efficiency, production and quality bring greater profits—and today textile mills all over the Americas are confirming this by modernizing with Bahnson.

Through constant research, specialized equipment and outstanding engineering, Bahnson offers the world's most complete line of industrial humidification equipment . . . including unit and central air-conditioning systems, and the latest in automatic air cleaners.

Put Bahnson in *your* plans . . for more efficient, more profitable plants. Let Bahnson equipment work for you as it does in seventy countries around the world, and in 91 of the top 100 textile mills in the United States.

Yes! 91 OF THE TOP 100

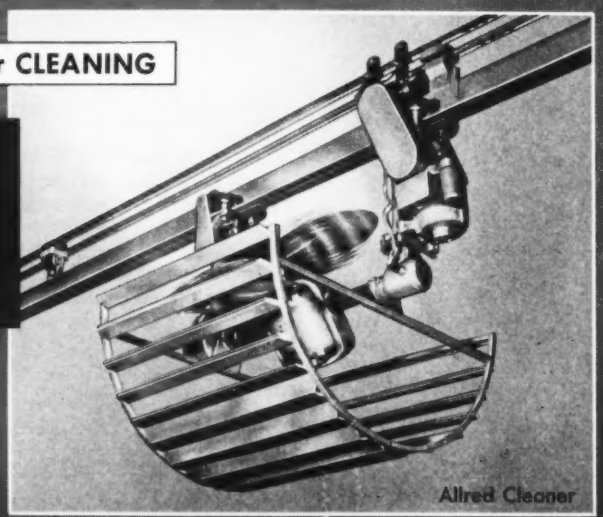
for AIR CONDITIONING

Bahnson Humidifying System

for HUMIDIFICATION

Centrifugal Humidifier

for CLEANING



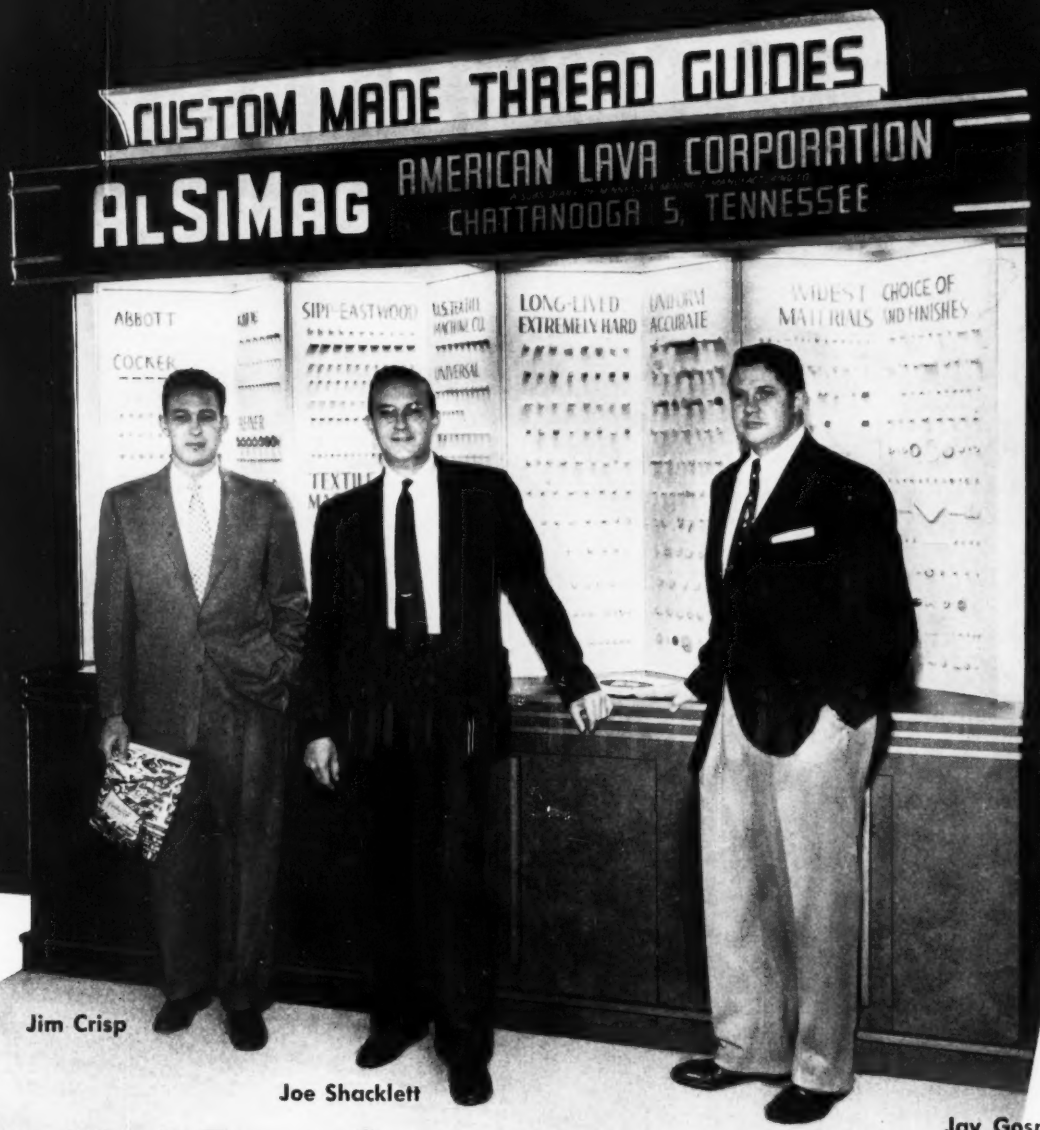
Allred Cleaner

Bahnson COMPANY
WINSTON-SALEM, N. C.

AIR CONDITIONING
HUMIDIFICATION CLEANING

SEE OUR EXHIBIT
Booths 11-18 on the Stage
AMERICAN TEXTILE MACHINERY EXHIBITION
Atlantic City, N. J.—
April 26-30, 1954

For more information, write direct or use Reader Service post card.



Jim Crisp

Joe Shacklett

Joe Spearman

Jay Gosnell
(not pictured)

ALSIMAG®

Visit us in Booth 21

YOU'LL SEE THE LARGEST, THE MOST COMPLETE SELECTION OF THREAD GUIDES EVER ASSEMBLED.

- **GUIDES FOR PARTICULAR TEXTILE MACHINES**
- **GUIDES FOR EVERY PURPOSE AND PROBLEM**

BOOTH NO. 21
AMERICAN TEXTILE
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Atlantic City Auditorium,
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APRIL 26—APRIL 30, 1954

TEXTILE MACHINERY EXHIBITION
AMERICAN ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954

53RD YEAR OF CERAMIC LEADERSHIP

AMERICAN LAVA CORPORATION

A Subsidiary of Minnesota Mining and Manufacturing Company

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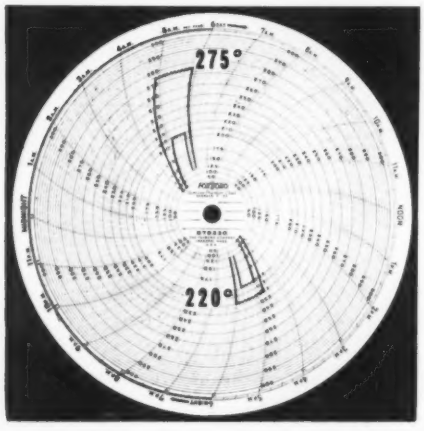
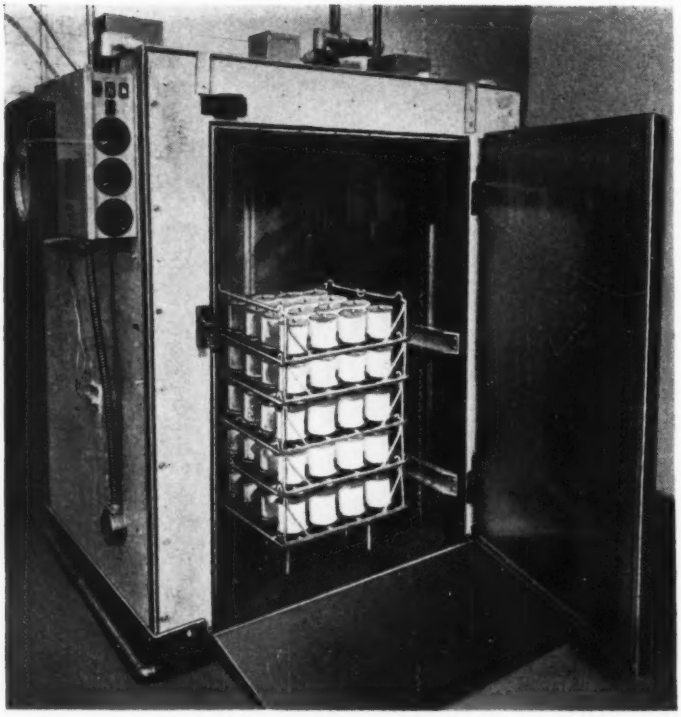
SALES ENGINEERS: NORTH AND EAST: Jay S. Gosnell, 671 Broad St., Newark, N. J., Mitchell 2-8159. SOUTHEAST: Joe E. Spearman, American Lava Corporation, Chattanooga 5, Tenn., 5-3411. ALL OTHER AREAS: J. B. Shacklett, American Lava Corporation, Chattanooga 5, Tennessee, 5-3411. CANADIAN REPRESENTATIVE: Ian M. Haldane and Company, Post Office Box 54, London, Ontario, Canada. CONTINENTAL EUROPEAN REPRESENTATIVE: P. C. Huguenin Luzern, Gerbergasse 6, Luzern, Switzerland

"H-W" CONDITIONER®



Operation over a
Wide Range of Temperatures
for all Textile Fibres



See this
latest type
Booths 103-104
at the

American Textile Machinery Exhibit
Atlantic City Auditorium
Atlantic City, New Jersey
April 26-30

Arranged to

• PREHEAT • CONDITION • EXHAUST

at end of operating period

The Industrial Dryer Corporation
STAMFORD, CONN.

The Secret of

BETTER PACKAGE DYEING

is SONOCO'S

DYTEX® TUBES

with PLASTAVON SLEEVES

. . . BETTER THAN EVER!

The Sonoco Dytex Tube has proven to be a more satisfactory yarn carrier for all standard forms of package dyeing. Standard sizes ⅜" I.D. x 6¾" long and 1⅝" I.D. in varying lengths. Special sizes available. Tubes can be furnished in certain colors for identification. The exclusive Plastavon Sleeve allows more even dye distribution and better control of "flow". Also reduces slippage in primary winding. Remember—the secret to better package dyeing is Sonoco's Dytex Tubes!

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION ATLANTIC CITY APRIL 26 TO 30 1954

See Sonoco's Complete Line of Carriers! Booths 71 and 72.

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.

MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS.
PHILADELPHIA, PA. AKRON, IND. GARWOOD, N.J. GRANBY, QUEBEC

MEXICO: Sonoco de México, S. A., Apartado 10239, México, D. F.

DEPENDABLE SOURCE OF SUPPLY

No longer under wraps...WHITIN'S "BIG 10"

You'll see them all in operation at the "show"

1 WINDER FOR FILLING BOBBINS

Whitin's fully automatic high speed winder is completely new in design. Its sharply increased production and flexibility will effect substantial savings in winding costs.

2 WOOL SPINNING FRAME

An exciting new frame incorporating more than 20 improved features, including flexible, variable controls of many frame elements.

3 RING TWISTER, ALL PURPOSE

An outstanding heavy duty, all purpose twister designed for maximum production, low operating costs, and long life.

4 UP-TWISTER FOR TIRE CORD

An outstanding machine with a remarkable performance record, never publicly shown before. Designed for heavy duty, high production performance for tire cord and other heavy yarn constructions.

5 SPINNING FRAME

A large roll machine for use on American System, with many new features including improved top roll mounting and weighting arrangements.

6 ROTO-DRAFTER

Introducing an entirely different type of machine for processing top on the American System. This is probably the most versatile textile machine ever produced.

7 ROVING FRAME

A large roll American System frame also with improved top roll mounting and weighting arrangement.

8 ROVING FRAME

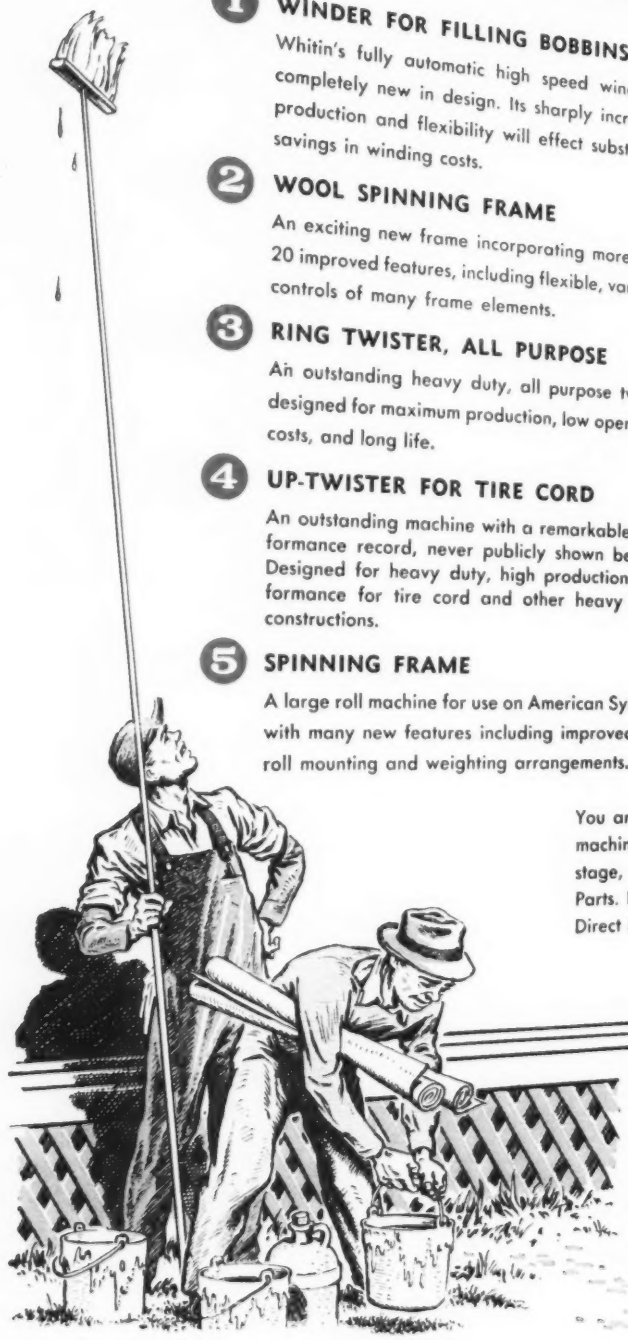
A profit-making 12" x 6½" roving frame featuring the renowned Whitin Inter-Draft system. The bobbins hold up to 55 oz. of roving and result in large savings in spinning creeling.

9 DRAWING FRAME

The latest Whitin draw frame producing even high quality sliver for cotton or synthetic fibers.

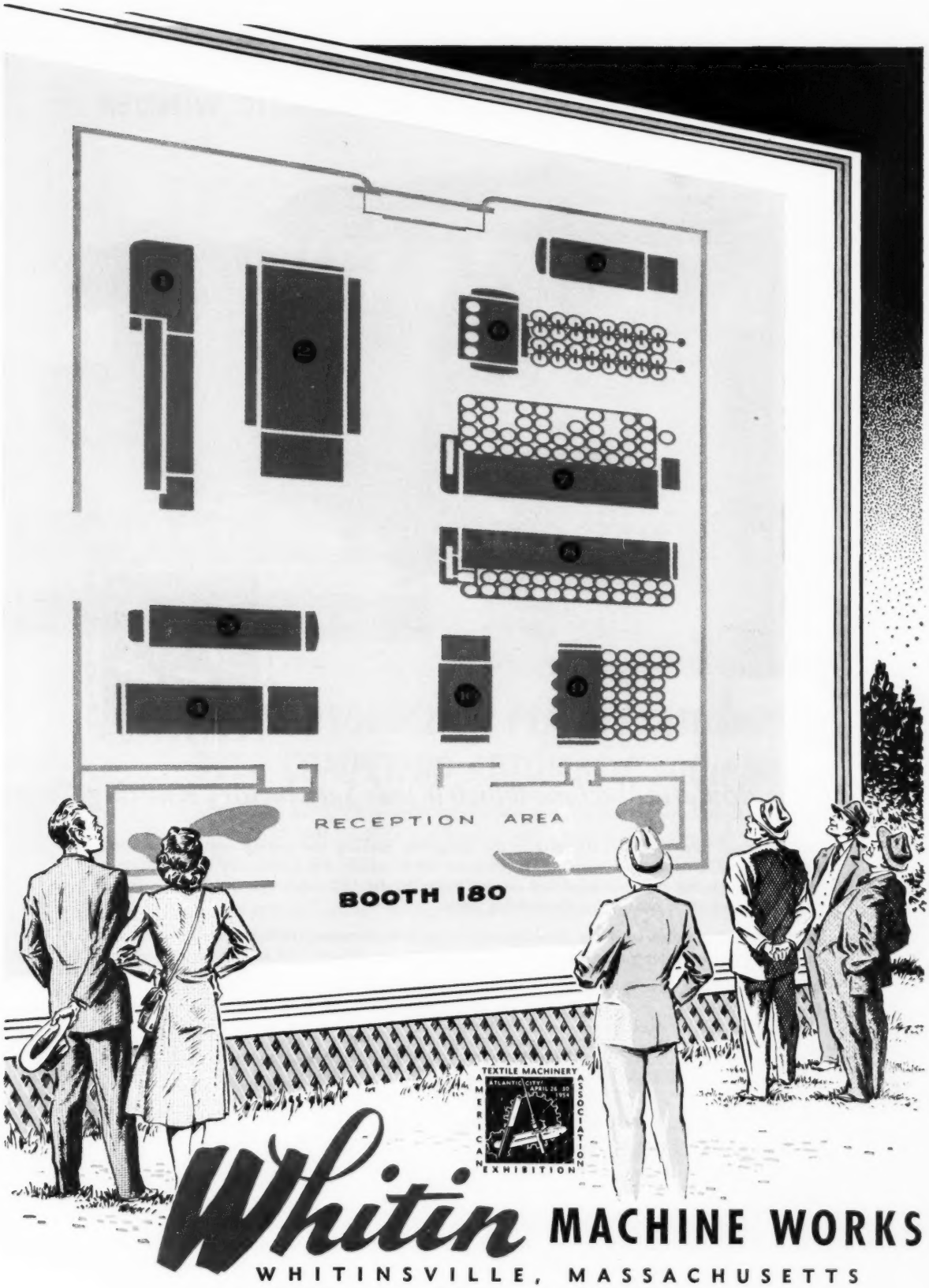
10 SPINNING FRAME

A large package, long traverse spinning frame featuring many improvements in overall design, the head end, and the drafting zone area. The frame will be equipped with two modern types of drafting assemblies.



You are cordially invited to visit our Main Booth 180 to see the machines described above in operation. Also, in Booth 24 on the stage, there will be a display of Whitin Repair and Replacement Parts. In addition, at Booth 289, there will be displayed a Stains Direct Spinner, for which the Whitin Machine Works is now agent.

Whitin, with its unsurpassed engineering and manufacturing resources, has spent years in developing, testing and perfecting these machines for but one purpose — to enable mills to operate more profitably in a competitive market — to produce more, and higher quality, textile products at lower cost.



Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

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See It at the American Textile Machinery Exhibition

FOSTER MODEL 202 AUTOMATIC WINDER

TEXTILE MACHINERY AMERICAN ASSOCIATION EXHIBITION
ATLANTIC CITY APRIL 26-30 1954

The Only Automatic Machine which Winds Satisfactory Knitting Cones

This brand new machine, 10 years in the designing, making and testing, marks a new step forward in automatic cone winding. It produces cones which are satisfactory for knitting — identical in quality to cones produced on the Foster Model 102, whose product, for years, has been the standard of quality for the knitting trade.

PRODUCTION It also increases production per operator between 100% and 300% over non-automatic winders, depending on kind and count of yarn. Up to 120 spindles per machine.

AUTOMATIC FEATURES The machine automatically locates and ties ends down (in a weaver's knot), automatically doffs empty bobbins and automatically sorts partially filled and empty bobbins, conveying them to two separate bins.

OPERATOR The only duties of the operator are to put full bobbins in chutes, put the loose end in a clip, don and doff cones and thread up new cones.

You can see this machine in operation at Booth No. 563, American Textile Machinery Exhibition, Atlantic City, N. J., April 26-30. Come and visit us.

FOSTER MACHINE COMPANY

Westfield, Mass., U. S. A.

Southern Office, Johnston Bldg., Charlotte, N. C. • *Canadian Representative,* Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que., and 35-37 King St., W., Toronto • *European Representative,* Muschamp Textile Machinery Ltd., Keb Lane Bardsley, Ashton-under-Lyne, England.

SEE IT AT THE AMERICAN TEXTILE MACHINERY EXHIBITION

The Brand New Foster-Muschamp

Model 66 Automatic Filling Winder

INCREASES PRODUCTION PER OPERATOR BY 300% OVER COMPETING AUTOMATIC EQUIPMENT

This machine gives the highest production and the lowest winding cost yet achieved. One operator, with this machine, can handle 5000 net pounds of yarn per 8 hour shift at a cost of about 19 mils per pound of yarn quilled.

It operates at a spindle speed of 15,000 r.p.m. *while preserving the original quality of the yarn and producing practically perfect bobbins.* All the operator has to do is to keep the magazine creel loaded and thread up. Everything else is done automatically, including conveying empty bobbins to the spindles, starting and stopping the spindles, doffing of full bobbins and conveying them to pinboards. The standard machine is 32 spindles.

The machine is also highly flexible and therefore suitable for many different types of mills. Different counts or colors can be run on different spindles of the same machine at the same time and the machine will wind equally well all types of yarn and many different sizes — from coarse counts to the finest — filament or spun.

Don't fail to see this machine in operation at Booth 563, American Textile Machinery Exhibition, Atlantic City, N. J., April 26-30.

TEXTILE MACHINERY EXHIBITION — ATLANTIC CITY APRIL 26-30 1954 — AMERICAN ASSOCIATION

FOSTER MACHINE COMPANY

Westfield, Massachusetts, U.S.A.

Southern Office—Johnston Bldg., Charlotte, N. C.

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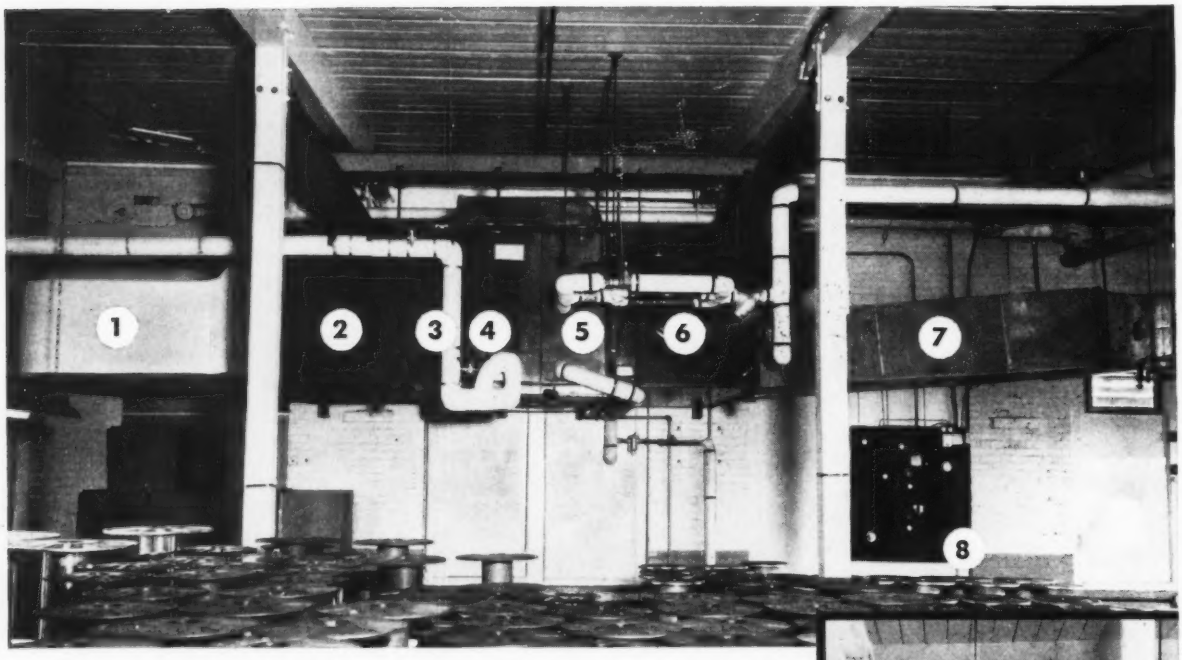

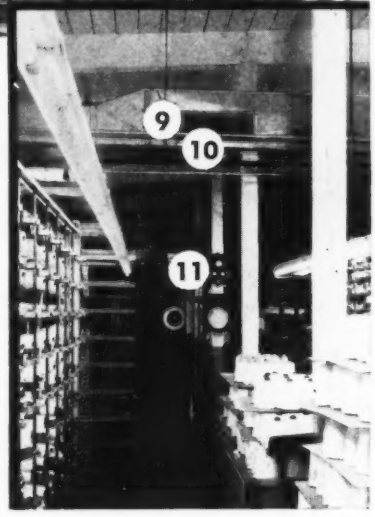

Amco Unit Dry-Duct System installed at Raytric Knitting Mill, Inc., Bristol, Conn. Shown here are (1) fresh air inlet from outdoors; (2) plenum chamber, showing recirculated air louvers underneath; (3) air filter; (4) heating coils; (5) cooling coils; (6) fan; (7) air duct; (8) control panel; (9) outlet in air duct; (10) atomizer; (11) humidity control

Floor Area Limited?

This compact AMCO Unit Dry-Duct System may be your answer

An Amco Unit Dry-Duct System is composed of a self-contained air conditioning unit, distribution ducts and room atomizers. The unit itself is compact and can be installed overhead, out of the way, where it will not take up valuable mill floor space.

Here's how it operates. Automatically operated louvers introduce into the unit fresh air and recirculated air in proper proportions. The air is filtered, if desired, and then heated as required. This "dry" air is distributed to the working area through ducts. Humidification is provided by room atomizers located in front of each air duct outlet. Spent air and heat is exhausted automatically through vent louvers.

Amco Unit Dry-Duct Systems operate with evaporative cooling *only*, or with cooling coils, as in the featured installation at Raytric Knitting Mill, Inc.

The Unit Dry-Duct System is but one of the many types of air conditioning systems which Amco manufactures, engineers and installs in textile mills. Amco is in the unique position of being able to give you the widest possible choice between humidification, evaporative cooling (central station, dry-duct, or ductless type) or refrigeration, alone or in combination. Call an Amco engineer. You can rely on him to give you advice on the system best suited to your needs.

AMCO

AIR CONDITIONING SYSTEMS since 1888

Humidification • Evaporative Cooling (Ductless, Dry-Duct or Central Station) • Refrigeration

AMERICAN MOISTENING COMPANY, PROVIDENCE, R. I. • ATLANTA • BOSTON • CAMDEN • CHARLOTTE • AFFILIATED WITH GRINNELL COMPANY, INC

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Up Against A Card Room Problem?

CARD CLOTHING

For Example

One mill, faced with what its president called a "terrible mess in the card room," reported:

"Your man left us in a position to handle our job successfully and with a personnel that he had trained for us. Our weaving efficiency, now over 90%, is about 10% above what it was. We give him all the credit — what he accomplished would have taken us months to do."

IT'S wise, then, to turn to a TUFFER man. He'll be on the job — RIGHT IN YOUR OWN MILL— and help you work out a solution.

He'll come up with *workable* suggestions and recommendations to kick up production and at the same time improve the quality of your material.

You'll get that valuable ON-THE-SPOT PERSONAL ATTENTION that TUFFER men have been giving to textile mills for years.

Contact us direct at Worcester, Massachusetts, or at our Southern plants at Atlanta, Georgia or Gastonia, North Carolina. Your call will bring immediate action, without obligation.

B-2

Manufacturers of Card Clothing since 1866

See us at Booths 339-340
American Textile Machinery Exhibition
Atlantic City, New Jersey
April 26-30, 1954

HOWARD BROS.

WORCESTER 8, MASSACHUSETTS
Southern Plants: Atlanta, Ga., and Gastonia, N. C.
Direct Representation in Philadelphia, Pa., *and in* Canada

TUFFER PRODUCTS Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Re-covered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plants • Midgley Patented, and Howard's Special Hand Stripping Cards • Top Flat Chains

Most of us dislike changes. We oppose them. Every improvement ever made, was made reluctantly. Nothing new is considered practical or possible until someone with broader vision than our own, does the things that "can't be done"--gets better results by methods that "won't work".

At your request, we will be glad to send you a copy of the above suitable for framing.

Be sure to see our interesting display of
Modern Textile Finishing Machinery at

BOOTHS 113 & 114 and 214 THROUGH 238
American Textile Machinery Exhibition

plus production
+ efficient operation of modern equipment
+ less down time of equipment
+ quick, easy repair . . . rapid parts delivery

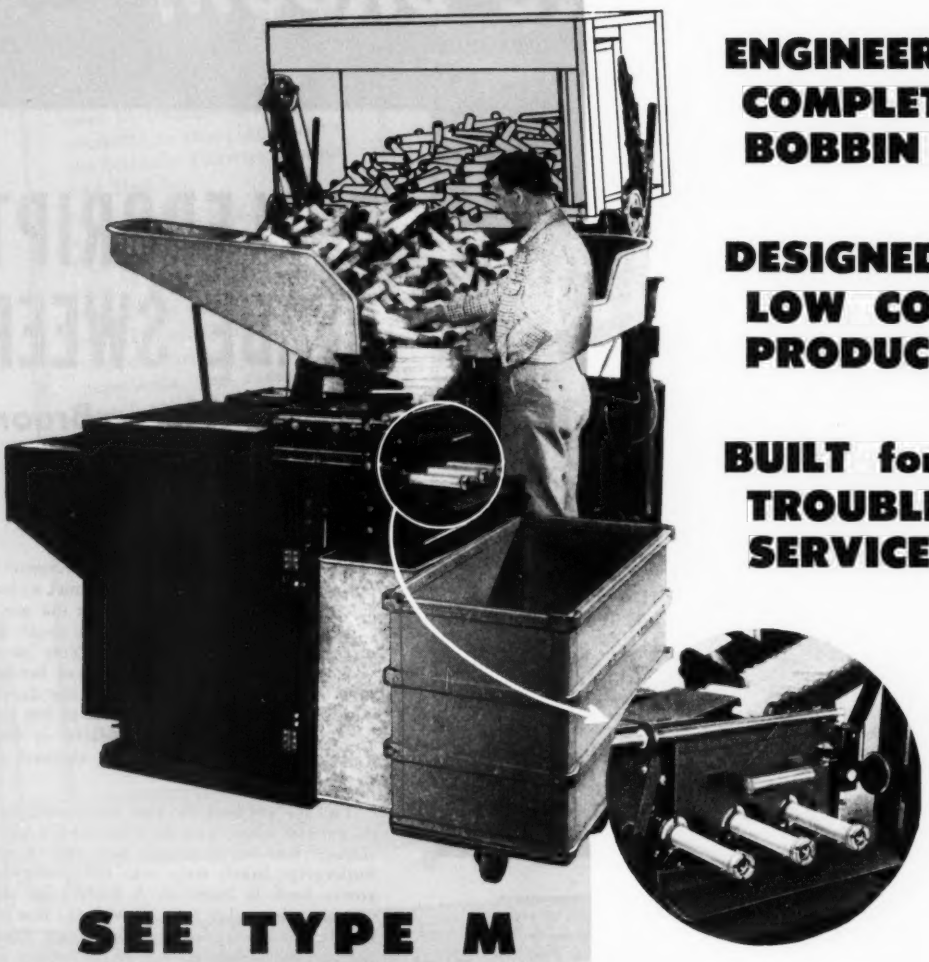
JAMES HUNTER
MACHINE COMPANY
NORTH ADAMS, MASSACHUSETTS FOUNDED 1847

BUILT BY HUNTER
. . . IT'S DEPENDABLE

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS MASS.

NEW!

MODERN *ROVING* BOBBIN CLEANER



ENGINEERED for COMPLETE BOBBIN SAFETY

DESIGNED for LOW COST PRODUCTION

BUILT for TROUBLE-FREE SERVICE

SEE TYPE M in OPERATION . . . TEXTILE MACHINERY EXHIBITION ATLANTIC CITY • APRIL 26-30 BOOTHS 277-287

THE Terrell MACHINE COMPANY, INCORPORATED CHARLOTTE, NORTH CAROLINA

Announcing THE FIRST GREAT ADVANCE in SWEEPING SINCE THE BROOM

You can use Blade Sweeps in pairs for sweeping open areas, as shown above, or singly for close work, as shown at right. For further information about the NEW Fullergript Blade Sweep call the Fuller Industrial Representative listed in the classified section of your telephone directory or write . . .

FULLERGRIPT BLADE SWEEP

Comparable to a Broom in Price but with 5 Times the Wear

Consider these money-saving features! A Fullergript Blade Sweep lasts 5 times as long as an ordinary broom. You use it the way it was made to be used . . . with the brush filaments perpendicular to the floor. You "plow" without breaking off the filaments or bending them out of shape. Furthermore, the densely packed brush material—palmyra, in this case, but you have a choice of fillers—is loop-anchored inside a rigid, metal channel and *cannot* come out.

You replace *only* the part that wears down — *not* the whole tool. So when the sweeping surface has worn down, just slip a new Fullergript brush strip into the clamp and you're back in business. A Fullergript strip compares favorably in price with the cost of a new broom . . . *but lasts 5 times as long.* Where can you use to best advantage the money you formerly had tied up in brooms?

Be sure to see our display at American Textile Machinery Association Exhibition, Atlantic City, April 26-30, 1954. Booths 704, 705.

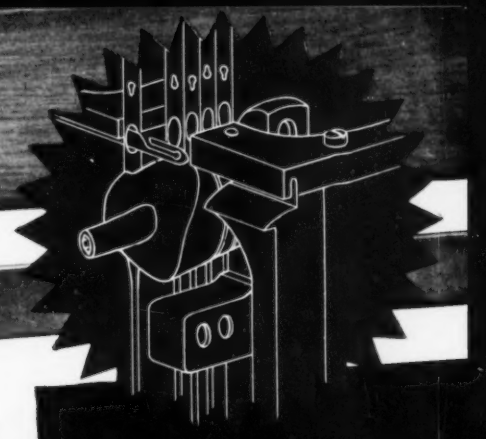
INDUSTRIAL Fuller BRUSH CO. DIVISION

3594 MAIN STREET • HARTFORD 2, CONN.

Power driven brushes, Factory & Institutional cleaning tools, Waxes & Detergents

Close-up of clamping device showing how brush strip may be set off-center and/or angled.

See us at the
TEXTILE MACHINERY EXHIBITION
Atlantic City, New Jersey
April 26-30, 1954
Booth Nos. 365 to 367
374 to 376



You Gain

. . . ALL THE ADVANTAGES OF EXPERIENCE, RESEARCH, MODERN DEVELOPMENT AND DESIGN CAN GIVE

It will pay you many times over to consider the benefits available in changing over to the Stehedco Drawtex Frames and Heddles.

Steel Heddle Mfg. Co., universally known for STEHEDCO & SOUTHERN Products that "Weave the World's Needs", in close cooperation with Barber Colman, has developed through its years of experience, and constant research, the *proper* harness for use with Warp drawing in equipment.

Exclusive Steel Heddle Features bring you . . . Freedom from Warp Streaks caused by Harness . . . Longer Heddle Life . . . Fewer seconds . . . Less Harness Adjustment in Looms with Greater Production and Versatility for both heavy and light yarns.

For complete information consult our staff of Field Engineers.

PERTINENT FEATURES YOU PURCHASE . . . AND ONLY SUPPLIED WHEN STEHEDCO IS SPECIFIED.

1. A Heddle made of tempered steel to give Maximum Life so designed that Fatigue Failure is eliminated. Can be furnished in either Carbon Steel properly plated or Stainless. Stehedco Drawtex Heddles are made of tempered steel approximately 7/32" in width to give ample room for selector or keyhold. Cut out at side to reduce weight and resistance to turning when picked off by turning worm and twisted into its proper location for needle to enter eye.

2. A spring effect in each Heddle so release from selector rod of drawing machine is positive. This also speeds up hand entering for those mills not using automatic drawing equipment.

3. Maximum bearing surface, plus ease of assembly with latest Stehedco designed rod support.

4. A simple and effective means for locking Heddle Rod in place and to provide proper tension. Accuracy and close inspection in manufacture assures perfect performance in entering machine.

5. A specially designed Hook for double bar construction where this type Harness is required. This provides a substantial bearing surface for all contacting parts so wear is practically eliminated.

STEEL HEDDLE MFG. CO., 2100 W. Allegheny Ave., Phila. 32, Pa
SOUTHERN SHUTTLES Paris Plant . . . Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.
STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street • Granby, Quebec, Canada

Stehedco and Southern
WORLD FAMOUS TRADE MARKS OF THE
Steel Heddle
Mfg. Co.

Other Plants and Offices:
Greenville, S. C. • Atlanta, Ga., • Greensboro, N. C. • Providence, R. I.
Textile Supply Co., Dallas, Texas • Charles H. Dunker Co., Los Angeles, Calif.
Albert R. Breen, Chicago, Ill.

1-0-17

NON-FLUID OIL

TRADE MARK REGISTERED

BENEFITS 2 WAYS!

In your spinning operation, you need a lubricant that will positively stay in roll necks and off aprons and roll coverings. The leaders—7 out of 10 mills—use NON-FLUID OIL . . . a modern lubricant for top and bottom rolls and saddles that pays for itself many times over because NON-FLUID OIL lasts 3 to 5 times longer than ordinary oils.

Insist upon NON-FLUID OIL and benefit 2 ways: (1.) better, trouble-free lubrication at less cost, and (2.) greater production of clean, even yarn.

You will want to know more about NON-FLUID OIL. Send now for instructive Bulletin T13-TW and a free testing sample of NON-FLUID OIL.

VISIT US AT BOOTHS #41 and 42:
AMERICAN TEXTILE MACHINERY EXHIBITION,
ATLANTIC CITY, N. J., April 26 to 30.

NEW YORK & NEW JERSEY LUBRICANT CO.

292 Madison Ave., New York 17, N. Y. • **Works: Newark, N. J.**

Southern District Manager: Lewis W. Thomason, Jr.

WAREHOUSES: Birmingham, Ala. Atlanta, Ga. Columbus, Ga. Charlotte, N. C. Greensboro, N. C. Greenville, S. C. Chicago, Ill. Springfield, Mass. Detroit, Mich. St. Louis, Mo. Providence, R. I.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

A WIDE VARIETY OF PRODUCTS *from* A WIDE VARIETY OF MATERIALS

REINFORCEMENTS
INSULATION
CLOTHING INTERLINING
UPHOLSTERY BACKING
FILTERS

SYNTHETICS -NATURAL FIBERS	SPECIAL MATERIALS	COARSE FIBERS
Acetate	Asbestos	Jute
Rayon	Rock Wool	Hair
Nylon	Glass	Sisal
Cotton		Reclaim Tire Cord
Wool		

Many new and unusual products are being developed

Because of the unique way the Rando-Feeder and Rando-Webber economically form a *Random Web* from almost any type of waste or staple fiber, many new products are now being developed . . . products unheard of a few years ago. Imagine making a web from hair, glass, asbestos or cocoanut fibers! All of these materials cannot be handled successfully on any other equipment.

Non-oriented webs have no crosswise, vertical or horizontal pattern . . . have strength in all directions . . . are resilient . . . will resist delamination and splitting. Webs made by Rando-Feeder and Rando-Webber can be dry processed, needle punched, quilted, felted and heat sealed.

Send us samples of your fibers. We will make webs for test purposes. Write for details.

RANDO-FEEDERS and RANDO-WEBBERS
AVAILABLE IN 3 SIZES
Now you can make Random Webs 40", 60" or 84" wide . . . up to 2" thick.

SEE OUR EXHIBIT AT ATLANTIC CITY APRIL 26 - 30 BOOTH 812-813

TEXTILE DIVISION
CURLATOR
CORPORATION
EAST ROCHESTER, NEW YORK

 For more information, write direct or use Reader Service post card.

Cotton, Wool, Worsted or any Synthetic . . . TWIST IT ON THE MODEL 10

Whether it's King Cotton, woolens, worsteds, the latest synthetic yarn or any of the blends thereof — the Leesona Model 10 Ring Twister has proved itself ideal whenever two or more ends are to be combined.

This all-purpose Ring Twister will soon offer a wetting attachment for mills wet-twisting cotton yarn. The new wetting attachment, now in the final stage of development, will give many advantages over the conventional methods of wet-twisting.

Three types of packages can be produced on the Model 10 — tapered top, double tapered and straight wind. Three builder motions can be provided.

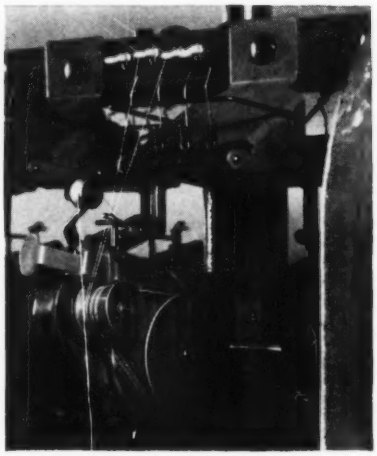
The versatile Model 10 combines from 2 to 12 ends, inserting twist from ½ to 55 turns, with a takeup package up to 40 oz. — all depending on the yarn being processed.

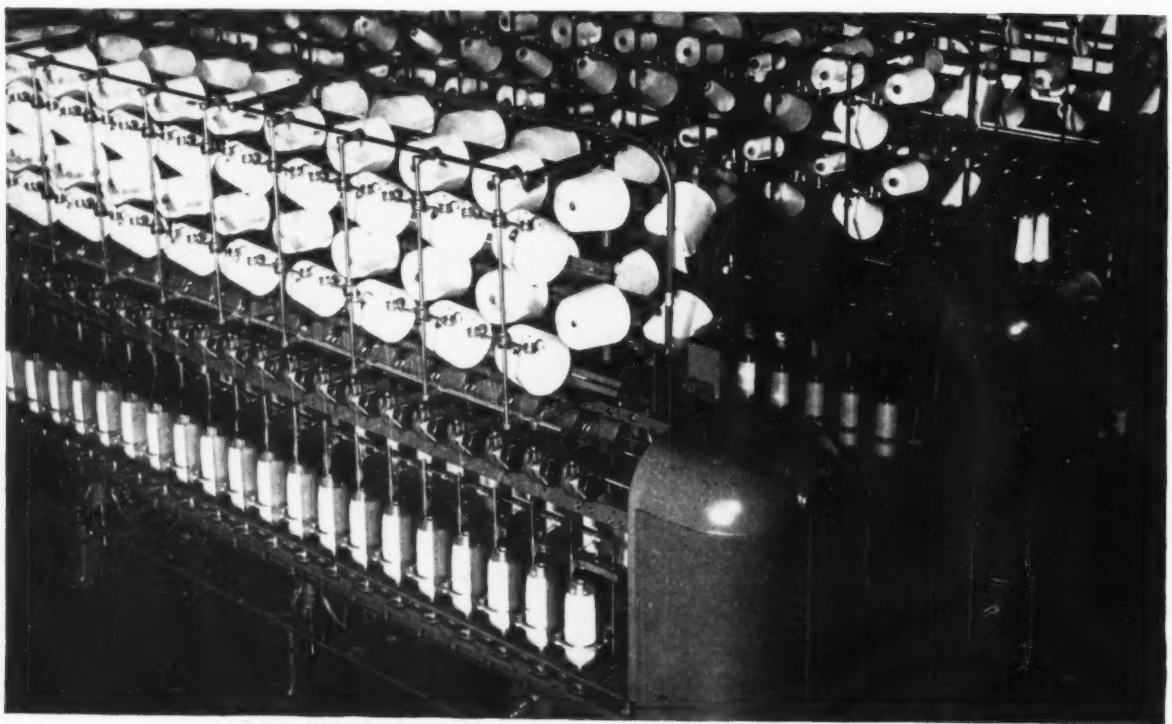
Delivery may be made from cones, cheeses, cakes, spools, pirns, bobbins or tubes.

Automatic Stop Motion

The Model 10 Ring Twister is equipped with an automatic stop motion for each end in the ply.

This stops the feed rolls and spindles, simultaneously, at any break or run-out — thus preventing drop ply in the package or roller laps. Also, knot-tying can be done in single ends before twisting, giving much smaller and trouble-free knots.



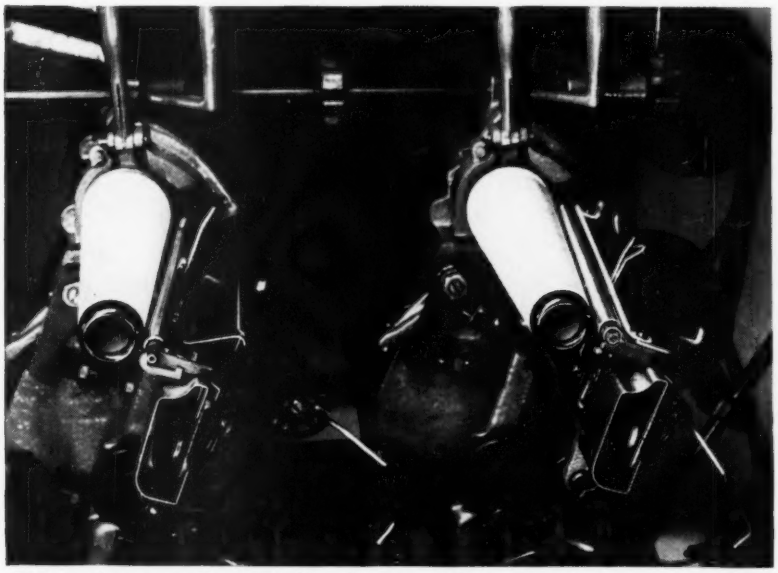


Over 251,400 spindles of Model 10 Ring Twisters are now in operation.

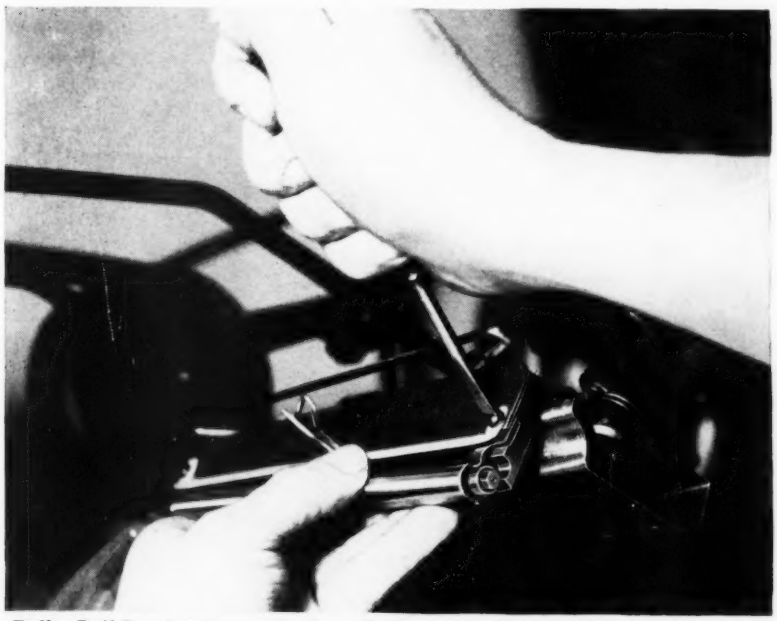
For more information, write direct or use Reader Service post card.

NEW FREE-TURNING ROLLER BAIL Designed for Long Service Life

Sealed-in Lubricant Lasts the Life of the Roller Bearing



Picture shows spindles with old and new type Roller Bail. Note on the new Bail (right) that the bearing is seated in the Bail holder.



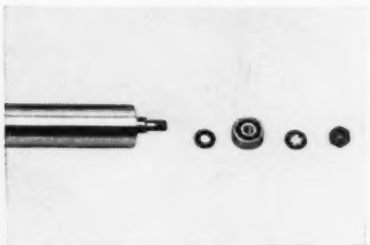
Roller Bail Bearing is outside the roll. By merely loosening two screws, it can be unclipped from the frame.

A new, larger diameter Roller Bail for attachment to Leesona No. 50 Winding Machines provides new exactness in winding pineapple cones or dye packages of synthetic yarns wherever package density and yarn tension must be closely controlled. In addition, this Roller Bail is built for long, trouble-free service. The bearings will never need lubrication during operating life.

This latter advance was carefully noted during torture tests where bails were run at 41,000 r.p.m. for 4,000 hours, much higher speed than any that would ever be encountered in mill practice. The bearings ended the tests intact.

The new ball bearings are seated in the Bail holder, rather than in the ends of the roll itself. The small diameter trunnion pins of the roll fit inside the ball bearings and rotate with the inner race. Because only the inner race of the bearing turns, its surface speed is much reduced, resulting in longer bearing life. The danger of absorption of oil by yarn getting wound around the pin at the end of the roll is eliminated because the bearings are completely sealed.

By the mounting of the bearing outside rather than within the roller, a simple clip arrangement attaches the bail to the frame. No precise adjustment is required to secure proper alignment and there is no necessity for forced or drive fits. The Roller Bail can be demounted by loosening two screws, and is easy to clean and repair.



Note simplicity of design — how easy it is to remove bearing to clean off any yarn that gets wound around trunnion pin.

23.3.17

UNIVERSAL WINDING COMPANY

P. O. Box 1605, Providence 1, Rhode Island

BOSTON, PHILADELPHIA, UTICA, CHARLOTTE, ATLANTA, LOS ANGELES

MONTREAL, HAMILTON, CANADA; MANCHESTER, ENGLAND; PARIS, FRANCE; BASLE, SWITZERLAND

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

Parks-Cramer
Loom Cleaner

What it is . . .

Blowers in tandem traveling continuously over the looms.

Simple track system, located at looms, leaving upper room areas clear.

Non-loading, paddle type fans.

Air currents directed close to loom surfaces.

Fixed and oscillating air outlets, individually adjustable for direction and velocity, with flexible extensions.

What it does . . .

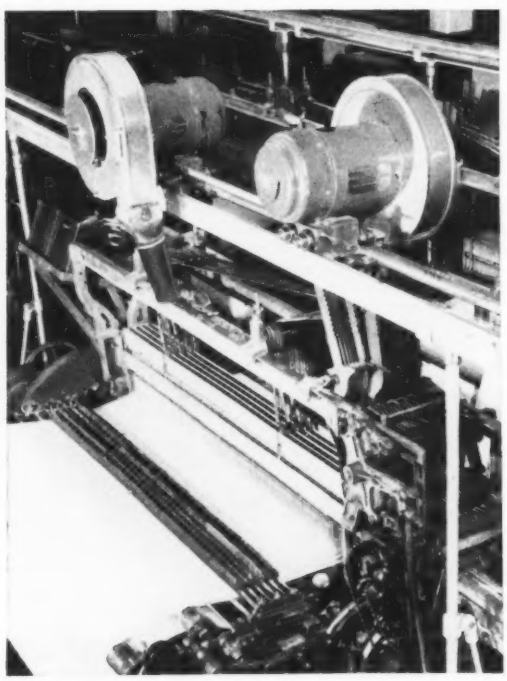
Passes over each loom every five to ten minutes.

Delivers air currents onto arch, harnesses, drop wires, stop motions, transfer motions, harness motions, lay, shuttle boxes, beam, yarns and fabric.

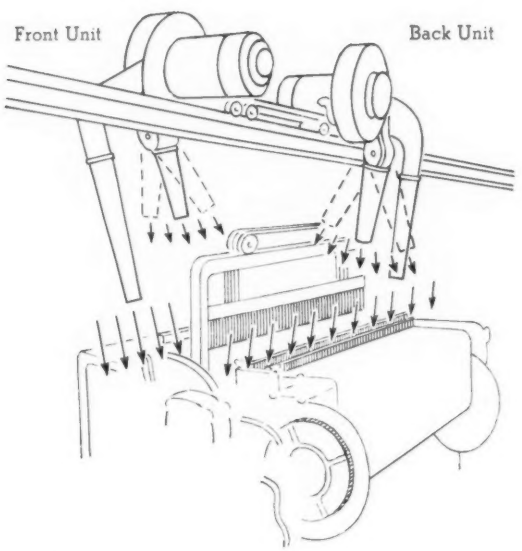
Prevents objectionable lint accumulations between warp-outs.

Eliminates most hand cleaning by compressed air. Lessens loom stops. Increases production.

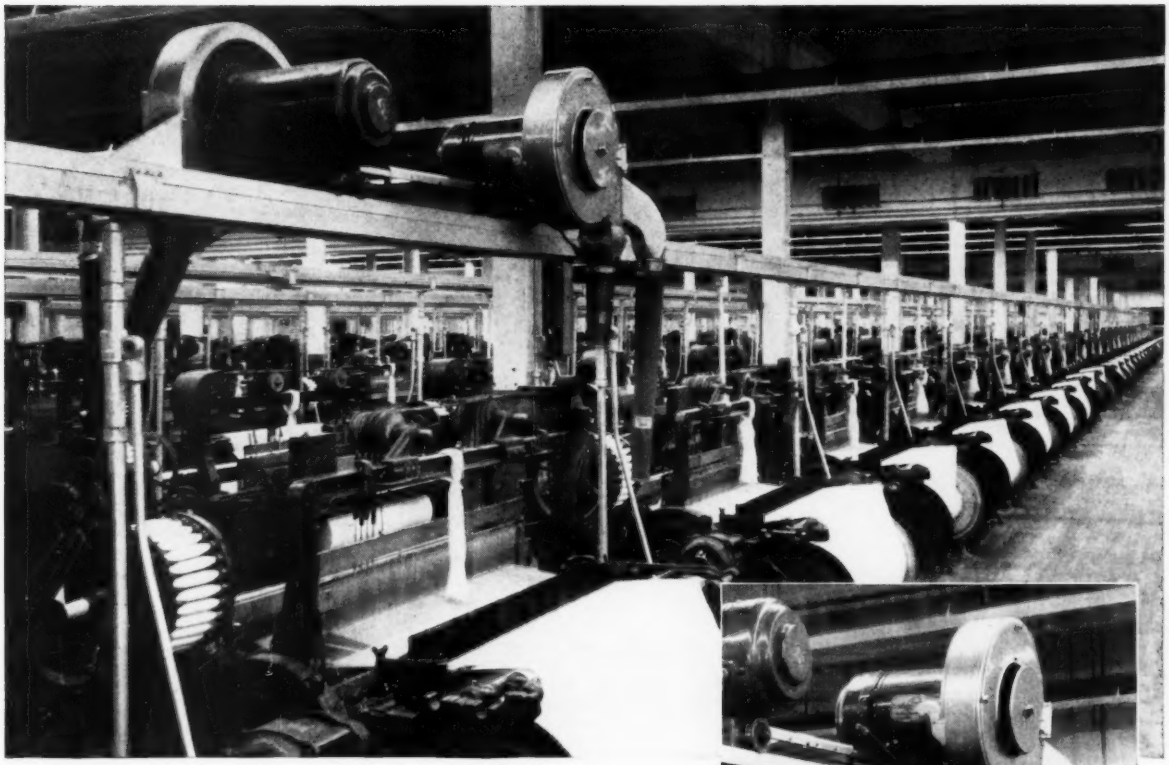
Greatly reduces woven-in lint, oil spots, set and start-up marks, skips, floats, and pick-outs.

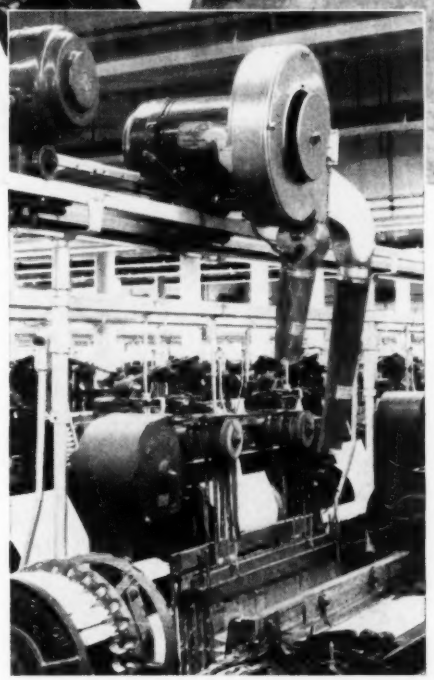


An early installation of Parks-Cramer Loom Cleaners over dobby looms on staple rayons. 65% humidity. No direct humidifiers. Continuously successful for over three years. Pays for itself every eighteen months in labor saving alone.



Air where you want it! Long impregnated cloth air outlets on each unit are fixed. Short impregnated cloth air outlets on each unit oscillate back and forth through adjustable arcs as indicated. Provision for momentary reduction of air from any outlet when passing over critical areas. Safe, rugged track system, largely self-cleaned. No exposed electric conductors.





Loom Cleaners over cotton weaving. 80% humidity. Direct humidifiers and Airchanger. Excellent results. Mill enthusiastically reports 1½% increase in weave room efficiency, 2% less seconds. In addition, system pays for itself every two years in labor saving.

After several years' extensive experience with mill installations made by our development department, we have sold this equipment to fourteen mills and completed eleven of these installations.

In accordance with our long-time policy, all possible has been done to make certain of both mechanical performance and cleaning effectiveness under the widely varying conditions of mill and product.

We now believe we are in a position to clean most cotton and cut synthetic weaving ranging from print cloths woven under high humidity on older looms to fine goods turned out by plain and dobby looms at lower humidities.

For further information and recommendations concerning installation in your weave room, consult

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C. ATLANTA, GA.

Southern Office and Stockroom, 914-16 East Franklin Avenue, Gastonia

NEW, LARGER SOUTHERN SUPPLY CENTER

Traveler stocks doubled—service facilities streamlined

F. P. BODENHEIMER
Granite Falls, N. C.

C. H. GREEN
Lanett, Ala.

W. L. HUDSON
Columbus, Ga.

C. W. WILBANKS
Laurens, S. C.

W. T. HORTON
Belmont, N. C.

In line with its well-known slogan, "Keep a step ahead," Victor Ring Traveler Company planned its new supply center in Gastonia to provide a supply service carefully matched to the expanding needs of Victor's many Southern customers.

- Twice the supply of Travelers formerly stocked at the old Gastonia headquarters will provide thousands of styles and sizes in ample volume to fill all average orders.
- Victor's experienced staff of local people, who know local needs and conditions, have all modern facilities to handle your orders with promptness and efficiency.
- Victor's Southern sales representatives operating from these headquarters are now even better equipped to provide the friendly Victor service that keeps production costs down and yarn quality up.

While Victor moves forward with the progress of the textile South, it offers the same high standard of service in any textile area — North, East, West. Make Victor *your* partner in progress.

VICTOR RING TRAVELER COMPANY

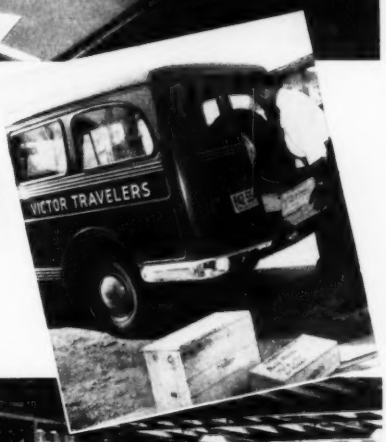
PROVIDENCE, R. I. • 20 Mathewson Street • DExter 1-0737
GASTONIA, N. C. • 914-16 E. Franklin Avenue • GAstonia 5-0891

Victor Sales Representatives who travel the Southern textile area are now better prepared than ever to help you with problems of Traveler selection and procurement.

SERVICE SPECIALIST—well-known to Victor's Southern customers by telephone contact, if not by sight, is Leona Brabham, able manager of Victor's new Southern supply center, continuing her 21 year experience as head of Victor's former sales office. Her "traveler-wise" understanding of mill operations is often a pleasant revelation to new customers.

TRAVELERS TRAVEL FAST when your orders are filled at Victor's new Gastonia supply center, because everything was planned for "streamlined" service. The small illustration shows a Victor truck being loaded with shipments of orders received earlier in the day.

"SUPERMARKET" STOCKS That's the impression you get when you look down the long rack illustrated—one of five equally large. They will be even more fully loaded when stocking-up the new supply center is completed.



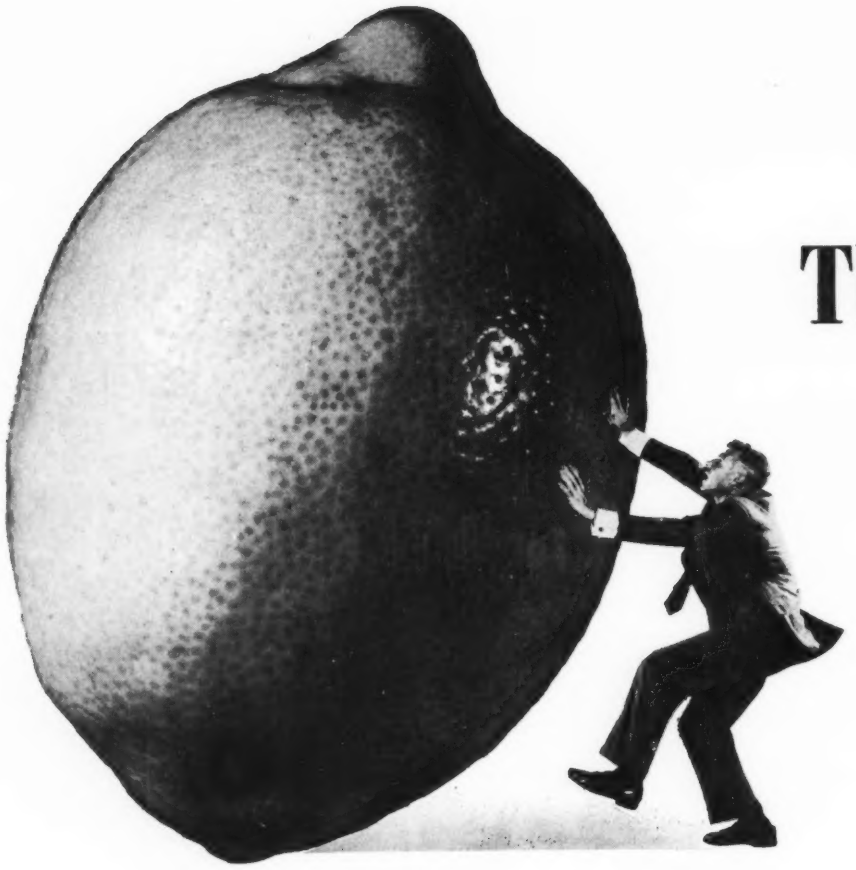
KEEPS VICTOR A STEP AHEAD

TO meet expanding needs of the Textile South

***Keep a step ahead with* VICTOR RING TRAVELERS**

Stop in and relax at Victor Booth 254-255
ATMA EXHIBITION • ATLANTIC CITY • APRIL 26—MAY 1

TEXTILE MACHINERY AMERICAN ASSOCIATION EXHIBITION ATLANTIC CITY APRIL 26-30 1954



The

EXCITING NEW

AVCO

stands for Permanent Rayon

Think what an irresistible story our dress-maker can tell the consumer—Avcoset finished rayon that keeps its size over a lifetime of launderings—that actually lives longer because the finish slows down the natural wearing-out process.

Avcoset is the sign of a *staple* miracle. It has a long life ahead.

Consider how Avcoset has paved the way to volume for the dress-maker with its powerful advertising to his customer, the retailer.

Consider too, how the consumer will turn towards Avcoset as American Viscose rockets Avcoset on one of the great advertising campaigns in textile history in publications such as LIFE, TIME, THE NEW YORKER, THE NEW YORK TIMES MAGAZINE and GOOD HOUSEKEEPING.

Nightmare of the Lemon

This man makes dresses. And few businesses ever gave anyone more sleepless nights. Take his fabric-problem. Every season he's swamped by a succession of new fabrics—miracles, "gimmick" fabrics and what not—or by the old standbys which lack excitement.

Our dress maker has a certain amount of capital to lay on the line. He can't afford to have it tied up in dubious or slow-moving fabrics. There's no Marshall Plan for him.

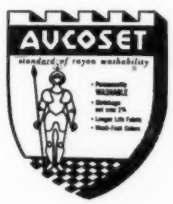
So he worries, "Which fabric will sizzle? Which will fizzle?" And his anxiety is further increased by the fact that in dresses, if you pick a few lemons you haven't got lemonade—you've got trouble.

Sure he likes miracles. But he wants *sound* miracles.

And he can find them—not on Mars or in the stars. But right in his own backyard. ***For Example:***

SET*

Washability



AMERICAN VISCOSE CORPORATION

AMERICA'S FIRST PRODUCER OF MAN-MADE FIBERS • 350 FIFTH AVENUE, NEW YORK 1, N. Y.
RAYON, ACETATE, VINYON,† FILATEX® †TMC ■ CCC

* Registered Trade Mark of American Viscose Corp. for Fabrics and Cellulose Ethers

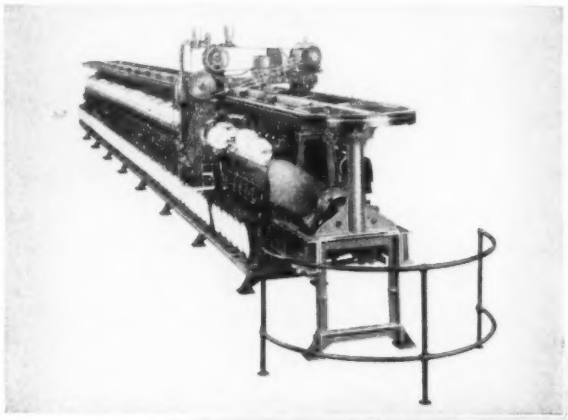
 For more information, write direct or use Reader Service post card.

BARBER-

New

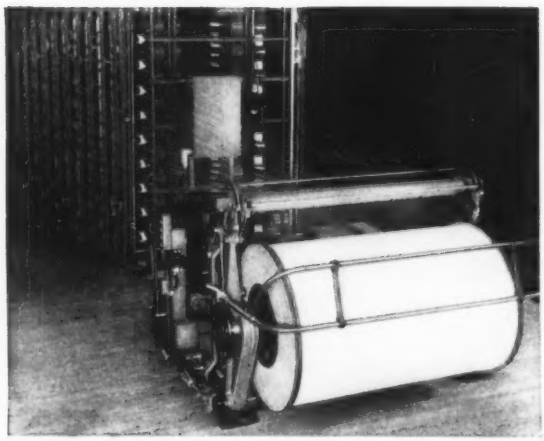
LARGE-PACKAGE AUTOMATIC SPOOLER

This new Type "D" machine has been developed to take advantage of the trend toward larger bobbins in the spinning. It will produce packages weighing up to 6 lbs. While the machine resembles the familiar Type "C" in many respects, it has a number of new, outstanding, and distinctive features that contribute to greater production at lower cost.



TEXTILE MACHINERY EXHIBITION — AMERICAN ASSOCIATION — ATLANTIC CITY APRIL 26-30 1954

ATLANTIC CITY



New

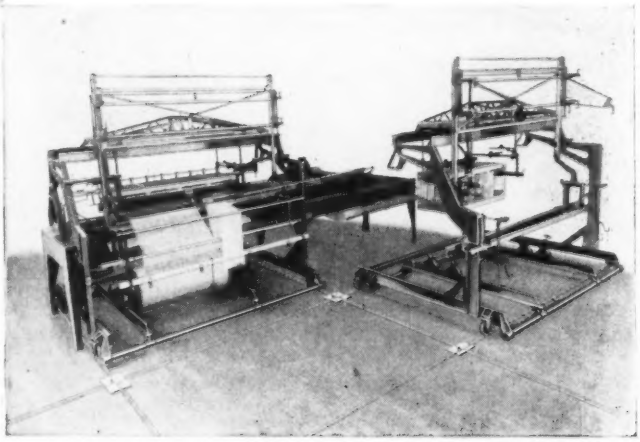
SUPER-SPEED WARPER AND CREEL

A new Warper capable of winding big beams up to 40" head diameter, and a new V-type inside-loading Creel capable of accommodating the 6-lb. Type "D" packages, have been developed as companion units to the new Spooler. This new Warper can also be used with standard-package Creels.

VERSATILE

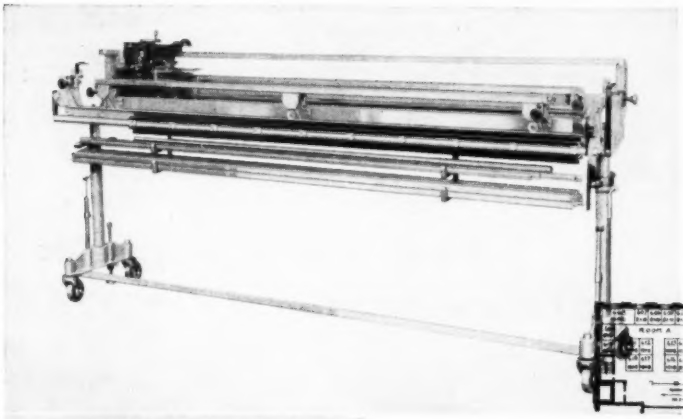
WARP DRAWING MACHINE

This interesting machine is typical of a number now available to handle a wide variety of work. It will be demonstrated on a complicated stripe beam warp. Reports from all over the world indicate substantial savings that can be obtained from use of these machines.



For more information, write direct or use Reader Service post card.

COLMAN



New

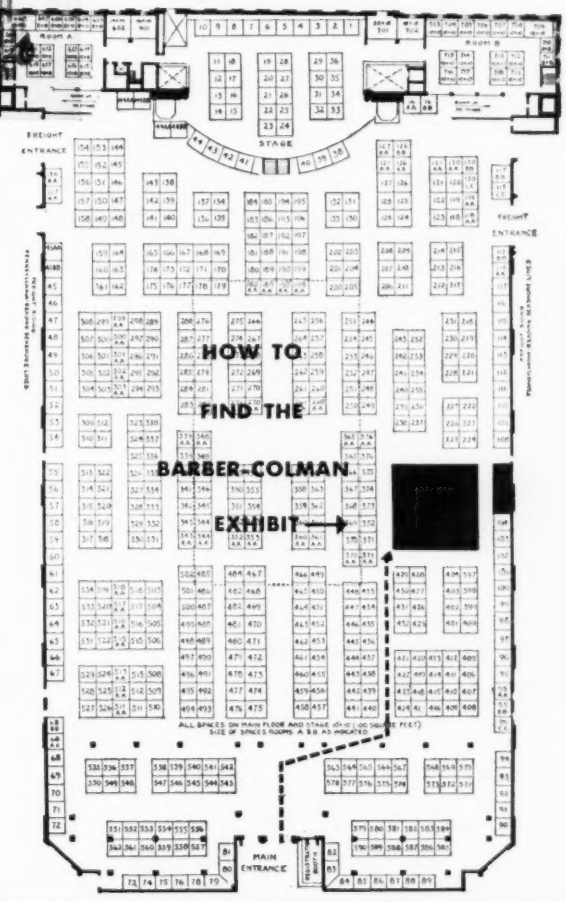
PORTABLE WARP TYING MACHINE

Here you will find a great improvement in the method of tying-in new warps *at the loom.* This machine, made in 46", 56", and 66" lengths (or longer to order), ties-in full width warps in a single operation and has a removable knotter unit. Three models are available for a wide variety of work.

APRIL 26-30

1954

AMERICAN TEXTILE MACHINERY EXHIBITION



AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. — GREENVILLE, S. C., U.S.A. — MANCHESTER, ENGLAND — MUNICH, GERMANY

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Kitakyutaro-machi 3-chome
Higashi-ku, Osaka, Japan

MIDDLE EAST
Arlind Corporation
65 Bedford Street
Stamford, Connecticut

 For more information, write direct or use Reader Service post card.

How Vicara® ZEIN FIBER improves a

Nylon adds strength and long wear. What special properties does Vicara contribute?

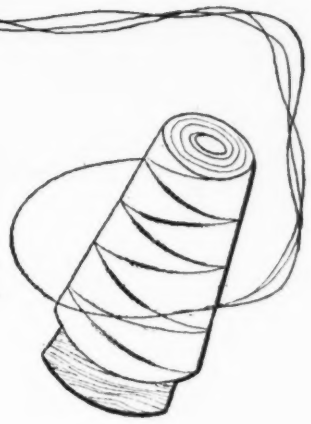
Soft luxury and moisture absorption. This means deep and satisfying comfort to the wearer — fabrics have a soft warmth — never feel clingy, clammy or sticky next to the skin.

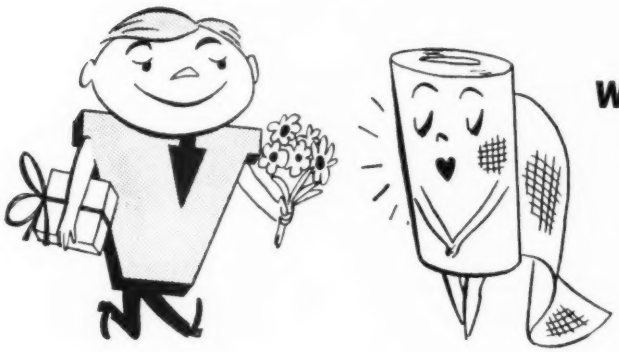
Where are Vicara-nylon blends currently being used?

Vicara-nylon blends (usually 50-50 combinations) are outstandingly successful in knit goods and sportswear. *Men's socks* are soft-feeling, moisture-absorbent, a joy to wear. *Women's and men's sweaters* feel as good next to the skin as they do to the hand. *Hand-knitting yarns* are getting enthusiastic consumer acceptance and *bathing suits* are up front in the Return to the Knit Swim Suit parade.

In many fabrics the advantages of one fiber seldom equal the combined advantages of two or more fibers blended together. Vicara, the man-made luxury fiber, improves any blend by adding moisture absorbency, lightweight warmth, washability, beauty, softness, comfort — even when used in small percentages.

blend...*with nylon*





What does Vicara bring to a woven fabric with nylon?

All the advantages it brings to a knitted fabric – plus easy drape, rich texture and luxury at low cost.

Is a Vicara-nylon blend easy to care for?

Yes – no care problem here. V*icara* washes and dries easily without shrinking or stretching. (The fabric actually grows softer with each laundering. V*icara* also helps the fabric to resist pilling, stringing and fraying.) Since V*icara* is almost entirely free from static, there is less attraction of lint and dirt to the fabric. And no attraction for moths.

Vicara®
ZEIN FIBER

Fiber Division • Virginia-Carolina Chemical Corporation
500 Fifth Avenue, New York 36, N. Y.

THE FIBER THAT IMPROVES THE BLEND

UNIFORMITY • BEAUTY • VERSATILITY • ECONOMY • EASE IN USE • SPINNABILITY
DYE-ABILITY • WARMTH • HANDLE FEEL AND DRAPE • ELASTICITY • RESILIENCE
ABSORBENCY • HEAT RESISTANCE • WASHABILITY • NON-FELTING • NON-ITCHING
NO ODOR • NO KNOWN ALLERGIES • MOTH RESISTANCE • MILDEW RESISTANCE

 For more information, write direct or use Reader Service post card.

4 IMPORTANT PRODUCTS from SKF DISPLAYED at the TEXTILE EXPOSITION

April 26-30, 1954 - Atlantic City

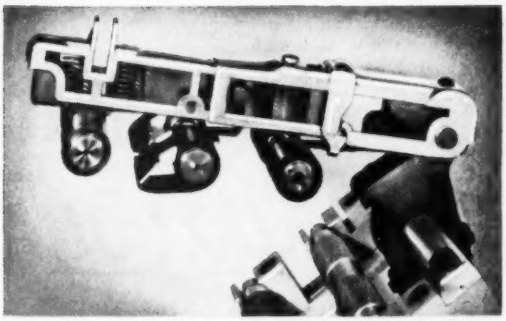
Booths 465-6

Once again, significant news is coming from SKF.

This time it's about four revolutionary SKF products for the textile industry.

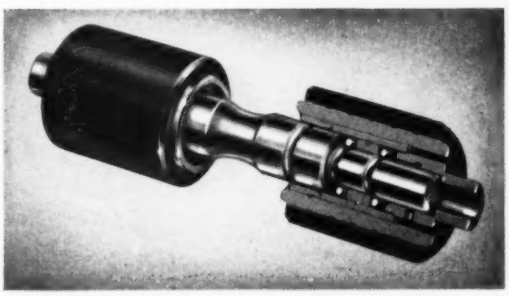
They are products which will help you improve the efficiency and economy of your mill operation. They are products which are attractively priced. They are products which are readily available.

They are products which you owe it to yourself to see when you visit the American Textile Machinery Exposition!



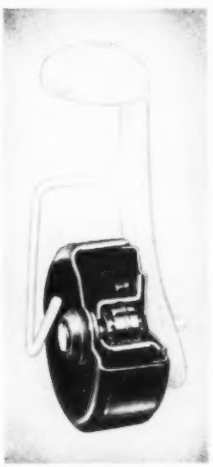
You'll see the SKF PENDULUM WEIGHTING ARM

Eliminates cap-bars, saddles, hooks and dead weights! Permits individual guidance of top rolls and insures parallel tracking with bottom steel rolls at all times. Each roll is weighted by its own coil spring, so that top rolls can be adjusted separately without affecting load distribution.



You'll see the SKF BALL BEARING TOP ROLL

Prevents oil from staining yarns. Delivers uniform drafting. Grease lubricated, requires re-lubrication only once every three years of three-shift, six-day week operation. Available for either pendulum or cap-bar guidance.



You'll see the SKF TENSION PULLEY

Tiltproof, double-row ball bearing. Bearing inner race rotation and stationary grease chamber gives this pulley greatly increased capacity over conventional types. All steel, dynamically balanced, Parkerized shell.

You'll see the SKF ROLLER BEARING SPINDLE

Spindles that usually save between 15% and 25% of power required by motors, tapes, belts, etc. The peak loads are reduced to a minimum . . . more uniform twist is obtained . . . and the yarn has a higher average breaking strength.

You'll see other SKF Bearings and the sand-blast-proof "SY" Pillow Block for textile mill applications, and be able to talk to SKF Field and Home Office Engineers who will tell you why SKF products can improve the efficiency and economy of your operations. Be sure to stop in. **SKF INDUSTRIES, INC.,** PHILADELPHIA 32, PA. — *manufacturers of* **SKF** *and* HESS-BRIGHT® *bearings.*

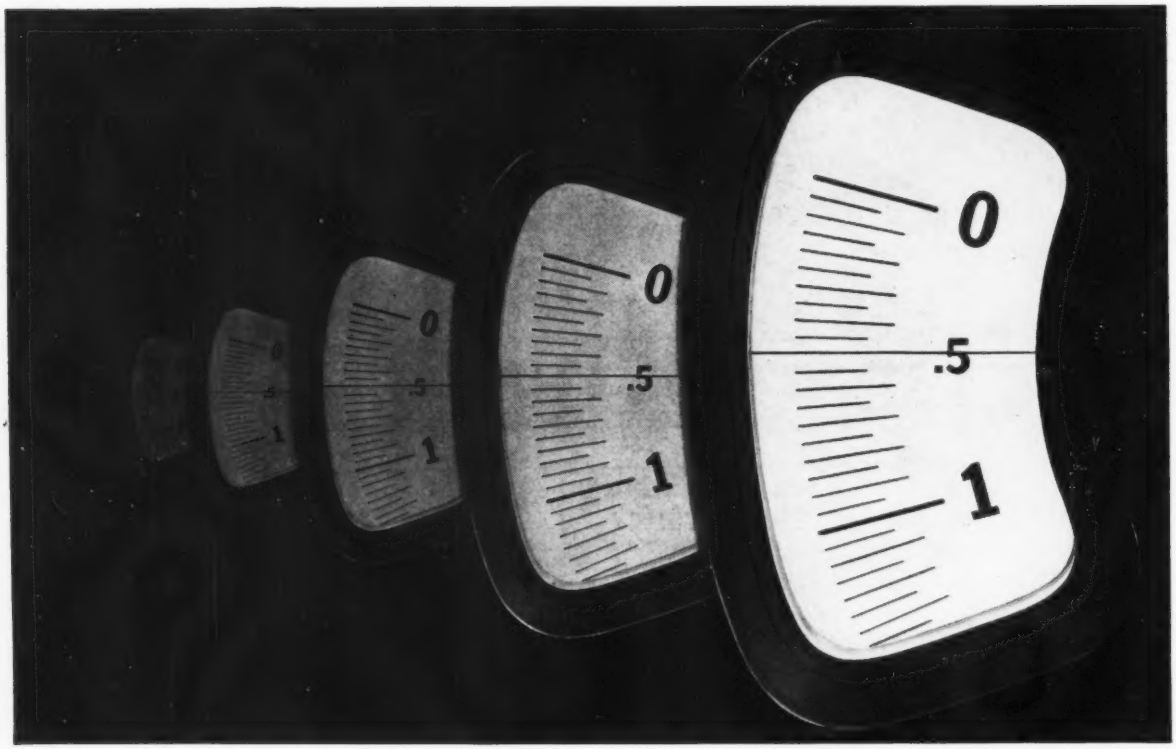
7525

SKF®

TEXTILE BEARING SPECIALTIES

WESTINGHOUSE

Fluorescent Lamps Still Match Color After 7500 Hours...*do yours?*



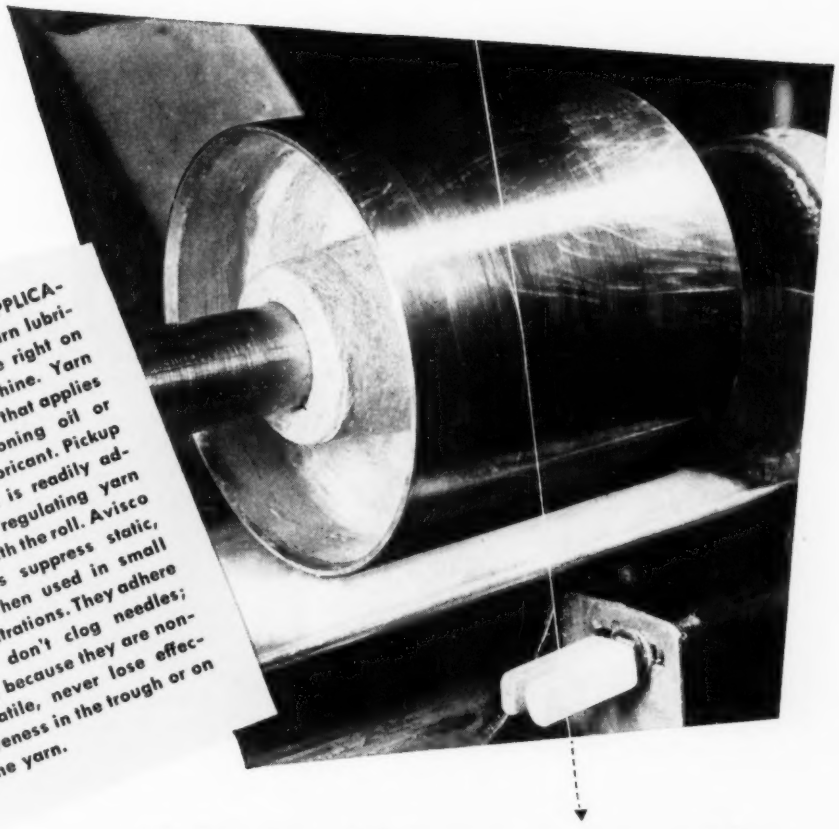
Tests on precision colorimeters, 1000% more sensitive than the human eye, check color performance in Westinghouse Fluorescent Lamps. To assure you that Westinghouse Lamps match color when new, and still match after 7500 hours, part of each day's production is placed on test racks. Here, lamps are turned on and off at regulated intervals to simulate daily usage. Every few hundred hours, color tests are made. These tests and your own eyes prove you can place two new Westinghouse Lamps alone in a fixture . . . or alongside lamps 7500 hours old...and you just can't tell the colors apart.

For details contact your Westinghouse Lamp Supplier, or write to Westinghouse Lamp Division, Bloomfield, New Jersey.

Tune in each week on TV... Westinghouse Studio One

YOU CAN BE SURE...IF IT'S

Westinghouse



EMULSION ROLL APPLICATION of Avisco yarn lubricant can be done right on the coning machine. Yarn runs over a roll that applies the Avisco coning oil or emulsified lubricant. Pickup of chemical is readily adjusted by regulating yarn contact with the roll. Avisco lubricants suppress static, even when used in small concentrations. They adhere well, don't clog needles; and, because they are non-volatile, never lose effectiveness in the trough or on the yarn.

Knitting efficiency starts with

AVISCO textile chemicals

Send for your copy of this reference booklet—"Avisco Textile Chemicals."

Avisco textile chemicals are developed in cooperation with and are manufactured by the Atlas Powder Company, Wilmington, Delaware.

Got a problem of lubrication, softening or static control? The right Avisco textile chemical can solve all three for you at the same time . . . because these versatile processing agents do a superior, all-around surface treatment job on yarn or fiber.

Avisco chemicals are stable . . . won't wick out, migrate, or evaporate. And they are effective in low concentrations.

Avisco, famous name in man-made fibers, offers a full line of chemicals for processing all types of fiber, natural and synthetic . . . and the application service of its field specialists. Write to Textile Chemicals Division, P.O. Box 455, Marcus Hook, Pa., or Textile Chemicals Sales, 1617 Pennsylvania Blvd., Philadelphia, Pa.

Avisco®

AMERICAN VISCOSE CORPORATION

America's first producer of man-made fibers

TOP NAMES IN TEXTILES NOW USE CYCLELOG CONTROLLERS

When leading companies like those listed at the right adopt a new and unique instrument, there must be a good reason. Yet this is only a partial list of today's CycleLog* users!

Whether you're dyeing wool, cotton, rayon, nylon or other synthetics, or blends, in the form of piece goods, skeins, tops, packages, raw stock, hosiery, or slubs, the CycleLog gives you the most completely automatic control ever developed.

You can control from a distant dye house office†, or at the kettle. No matter what your dyeing temperature schedule may be, it is easily and precisely set up, in a matter of seconds, by turning the knobs on the face of the instrument. *No cams!* And pushing a button starts, or repeats, any cycle.

Write for detailed Bulletin 438, and let us make recommendations for your particular problem. **The Foxboro Company, 844 Neponset Ave., Foxboro, Mass., U. S. A.**

* TRADE MARK

†*A new electronic CycleLog is designed specifically for this use.*

Bachmann Uxbridge Worsted Corp. (Uxbridge Worsted Co.)
Barre Wool Combing Co., Ltd.
Bishopville Finishing Company (A Division of Reeves Bros., Inc.)
Bradford Dyeing Assn. (U.S.A.)
Chatham Manufacturing Co.
Clearwater Finishing Co. (United Merchants and Manufacturers, Inc.)
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Cyril Johnson Woolen Co.
Dan River Mills, Incorporated
Davenport Hosiery Mills, Inc.
Delta Finishing Co.
Dorlexa Dyeing & Finishing Co.
Erie Dyeing & Processing Co.
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Fieldcrest Mills
Globe Dye Works
Goodall-Sanford, Inc.
Hans C. Bick Co., Inc.
Hayward-Schuster Woolen Mills, Inc.
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See our Booth #353 at Atlantic City in April

FOXBORO REG. U. S. PAT. OFF. **CYCLELOG CONTROLLERS**

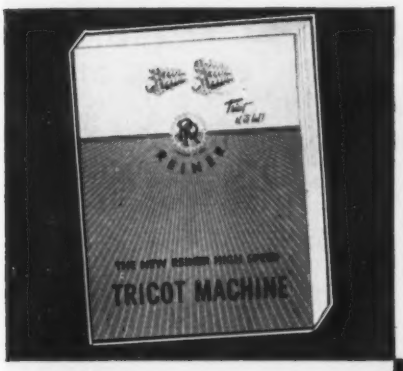
FACTORIES IN THE UNITED STATES, CANADA AND ENGLAND

*and a startling new piece of finishing machinery to be announced!

REINER MACHINES PAY OFF

In precision, workmanship, economy, performance, and highest returns from flawless operation—whether it be in the knitting, weaving, finishing or embroidery line. Reiner machines are your safest guarantee for all around excellence and profitable manufacture. There is nothing finer than Reiner. The same high standards of machine performance are guaranteed whenever we act as agents for other concerns.

Spare parts are available for all our equipment at all times. Only Reiner offers a full line of warp-knit machines—Tricot, Simplex, Raschel—plus all required warpers, creels—and now automatic pleating machines and finishing equipment.
For detailed information ask for any catalog shown here. You will receive our prompt attention and—you are always welcome to visit our plants in Weehawken, N. J.



THE REINER RASCHEL MACHINE

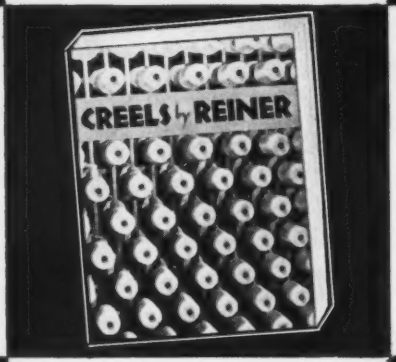
Now offered in two models. One with up to 8 guide bars and 1 or 2 needle bars and many other attachments for special effects and constructions. Gauges 24—36—40 or as requested.

Another model comes with up to 5 guide bars and up to 56 gauge—particularly suitable for elastic power nets, tulles or coarser goods such as shoe tops, draperies, etc. Sturdy construction permits highest Raschel speeds, equalling 3-bar tricot speeds with the advantages of 5 guide bar range.

THE REINER TRICOT MACHINE

Champion of them all—in round the clock operation at highest speeds with unexcelled quality yields.

Available with 2 or 3 bars, and many other features—all insuring fabric free of stop and shade marks. These rugged, reliable and popular machines need a minimum of care and maintenance. Truly—Tricot at its Best! We can supply you with all your warp-knit requirements—from creels and warpers to finishing equipment.



THE REINER CREELS

Available for all needs, in all dimensions, with all types of stop motions and Reiner patented tensions. They are favorites in many mills and combine perfectly with Reiner Warpers and Beamers. We offer Magazine Creels, Single Type Jack Creels, Truck Creels, Heavy Duty Creels or Custom-made Models. Available for pirns and all other types of packages. Readily usable with any make of warper or beamer.

THE REINER SECTIONAL WARPERS

Are leaders in their field. They are available in lengths up to 84" and their many features assure highest grade warps at top speeds with automatic devices for rugged, trouble-free operation. They are perfect teammates for Reiner Creels, and can be found in many mills here and abroad. Readily usable with any make of creel.

THE REINER SIMPLEX MACHINE

A ruggedly built high speed unit, employed to produce gloves, swim suits, dinner jackets, riding vests and other end products. This is the machine for producing simulated sueded leather, which has many profitable applications in end products.

THE FAMATEX TENTERING MACHINE

Suitable for all kinds of fabrics. It is unique in that it combines tentering, drying, cooling and conditioning. Fabric quality is incomparably higher than that produced by formerly used tentering and drying machines. This unit is a product of the world famous **FAMATEX GMBH** in Western Germany, and is sold through Reiner-Famatex, Inc., at 550 Gregory Avenue, Weehawken, N. J.

THE REINER TWIN KNITTER

Available up to 75 gauge. It is specially well suited for top gauges, needs no expensive air-conditioning systems and can be efficiently operated by male or female help. This 4-section Reiner unit in leading branded mills produces highest gauge stockings par excellence. It is an automatic machine, with attachments for loopless toe, gauge perforation (lace), ringless, black and framed heel—15" heads, etc.

THE REINER FULL FASHIONED SWEATER MACHINE

The only American-built machine of its kind. It is fully automatic and faster than any of the converted types available.

It is offered in all popular sweater gauges—knitting width 28" and 32" —features automatic V-neck attachment—automatic fashioning control — constant carrier lead — single coullering, etc. Rugged construction—highest speeds. Reiner will soon offer an automatic flat power machine for cuffs, collars and bottoms.

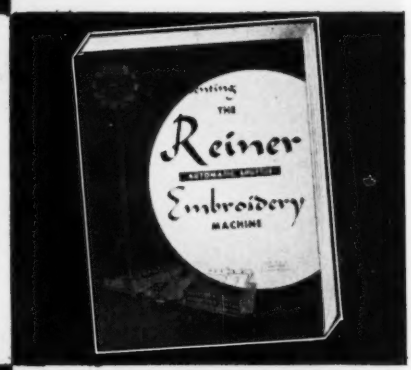
THE REINER BEAMERS

Available up to 36" flange diameters. Their many features assure flawless warps and automatically maintain constant speeds from 100 to 900 yards per minute. This unit is built for rugged, around the clock work and yet can be adjusted to take care of coarse as well as delicate yarns with equal ease of operation. In many weaving mills these beamers together with Reiner creels are favorite teams, yet readily usable with any other make of creel.

THE REINER AUTOMATIC SHUTTLE EMBROIDERY MACHINE

The first American-built machine of its kind, progressively developed in close cooperation with the embroidery trade.

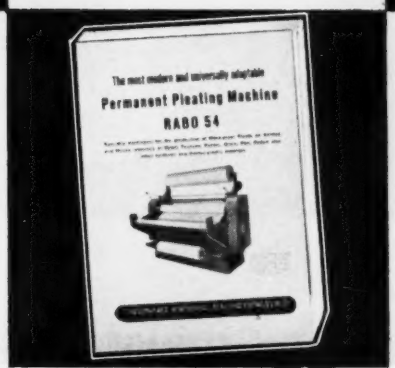
Our background as pioneers in this field for more than 50 years are behind this first American-made Reiner Shuttle Embroidery Machine. Available in 10 to 15 yard lengths.



THE ZANGS AUTOMATIC EMBROIDERY MACHINE

Permits direct embroidery, there is no subsequent sewing-on of patterns. You are independent of skilled labor.

Available up to 6 heads. These machines are controlled by Jacquard cards and are fully automatic. They work equally well with silk, cotton or wool on all fabrics, woven or knitted. They offer substantial savings when producing embroideries that would otherwise be made by hand. A product of Western Germany.



THE RABO 54 PERMANENT PLEATING MACHINE

Makes flat or knifed pleats and box pleats in a limitless variety. Working width 59½ inches. Temperature controlled by patented thermionic system. Automatic rewinding arrangement of pleated fabric — Automatic paper feed — Water cooled outlet table. Also offered is a smaller 20" model to make crystal pleats, with or without bow attachment. Both models suitable for processing woven and knitted fabrics made of synthetic or natural fibres. A product of one of the oldest pleating machine manufacturers located in Western Germany.

1903 50th Anniversary 1953

ROBERT REINER INCORPORATED

10 MINUTES FROM TIMES SQUARE

Take Bus Nos. 61 or 67, from Platform No. 60, Port Authority Bus Terminal, 41st Street and 8th Avenue, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882.

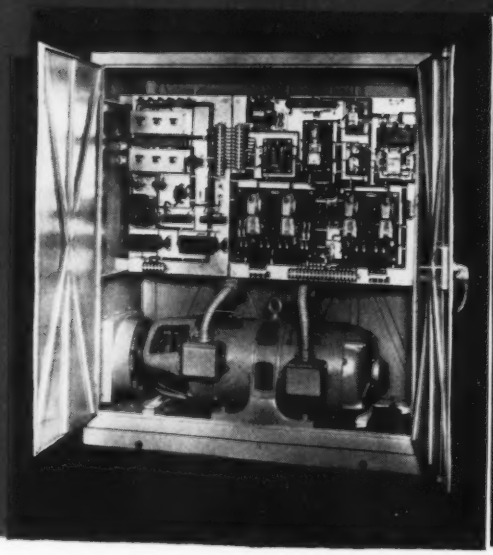
FOUNDED IN 1903 **550-564 GREGORY AVENUE, WEEHAWKEN, NEW JERSEY**

Dial the Production Speed

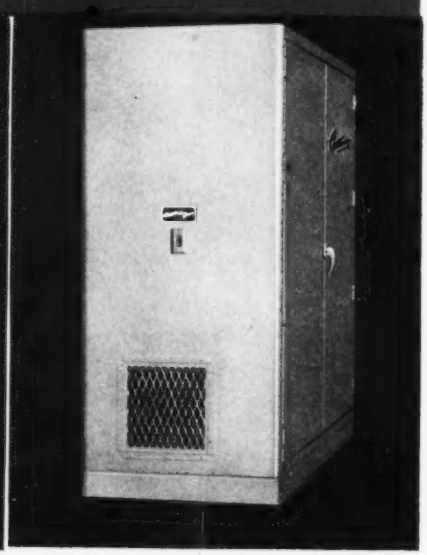
TO SUIT YOUR EXACTING
PROCESS REQUIREMENTS
WITH A

Century SELECTIVE SPEED Drive

POWER UNIT—Inside front view showing control and motor generator set.



Side view of power unit showing air cleaner for forced air ventilation.



SEE CENTURY EXHIBIT, Booth 126AA

American Textile Machinery Association Exhibition
April 26-30, 1954 . . . Atlantic City Auditorium

CENTURY ELECTRIC COMPANY

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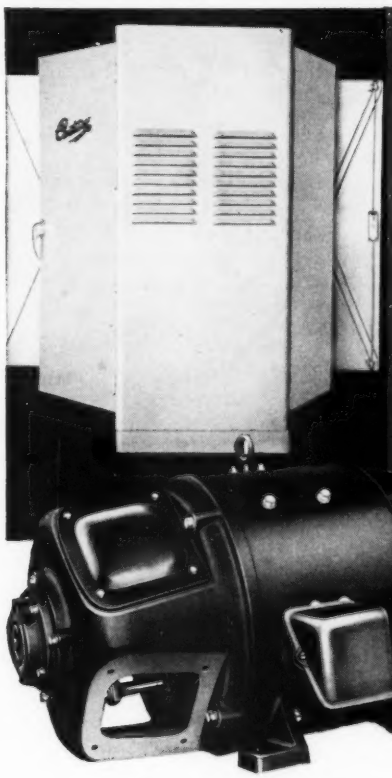
For more information, write direct or use Reader Service post card.

Century SELECTIVE SPEED, ALL ELECTRIC, MOTOR DRIVES

- Operate from alterating current.
- Offer an extremely wide range of practically stepless speed control, to cover the variable processing requirements in modern Textile practices.
- Engineered for specific application requirements, with regard to: Load jogging—load acceleration—normal or quick deceleration with adjustable dynamic braking—jog in reverse or run in reverse, or both—multiple coordinated drive motors—remote single or multiple control positions.
- For applications such as: Slashers—Ranges—Water Mangles—Warpers—Calenders—Sanforizers—Printing and Dyeing—Bag Making Machinery—etc.

Call for a Century Application Engineer TO EXPLAIN FURTHER DETAILS OF THE CENTURY SELECTIVE SPEED DRIVE

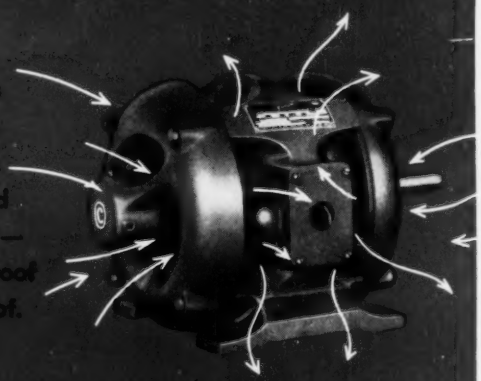
Side view of Power Unit. Rear doors are available when special control requires access.



Typical drive motor which operates from the alternating current power unit.

Century Textile Motors Shed Lint

Other Century Motors are offered in ratings from ⅛ to 400 horsepower—A.C. and D.C.—with drip proof—splash proof—dust proof—and explosion proof. frames.



Century C MOTORS

Offices and Stock Points in Principal Cities

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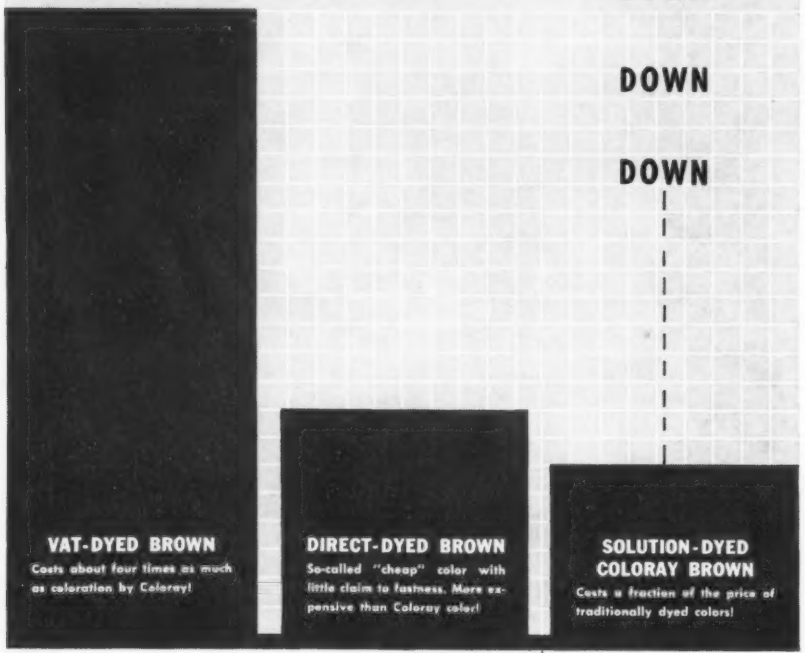
1806 Pine Street • St. Louis 3, Missouri

Highest Colorfastness at Lowest Color Cost!

COURTAULDS'

Coloray T.M.

SOLUTION—DYED RAYON STAPLE BRINGS THE COST OF COLOR


DOWN
DOWN
DOWN
VAT-DYED BROWN
Costs about four times as much as coloration by Coloray!
DIRECT-DYED BROWN
So-called "cheap" color with little claim to fastness. More expensive than Coloray color!
SOLUTION-DYED COLORAY BROWN
Costs a fraction of the price of traditionally dyed colors!

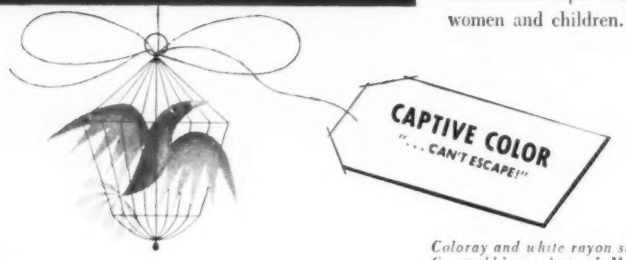
Here's why Coloray is so good for volume business. It's a *bargain*. Coloray colors offer real savings over traditionally-dyed colors. And in the popular dark shades, where dyeing costs zoom, Coloray savings are spectacular!

Look at the price advantage with Coloray Brown. You do as well with Coloray Black. Almost as well with navy, dark green and red. And so on down the Coloray range. Coloray also greatly reduces the cost of color in blends—whether the other fiber is dyed or not, whether the other fiber is synthetic or natural. Yes, Coloray makes possible all kinds of color wonders . . . on a shoestring. For instance! A beautiful grey can be developed by blending 1/3 Coloray Black with 2/3 white cotton. Color cost: as little as 1/3 of a cent per yard!

Coloray cuts processing costs *too*. Here's a color fiber ready to spin into a color yarn. No winding or re-winding of yarn before and after dyeing. And here's really *uniform* color—side to side, end to end. No streaky, shaded ends to discard—at a loss. You profit all the way with Coloray, the original solution-dyed fiber by Courtaulds, the company that developed the viscose process.

What a price story! And it means this. With Coloray, supremely color-fast, color-rich merchandise is now within the reach of the great mass market. What an opportunity to *volume*-sell on a really grand scale. Piece goods. Draperies. Upholstery. Slip covers. Auto seat covers. Convertible tops. Wearables for men, women and children. *You* name it.

Visit Courtaulds' exhibit
American Textile Machinery Show
Atlantic City — April 26-30
Booths 860-863

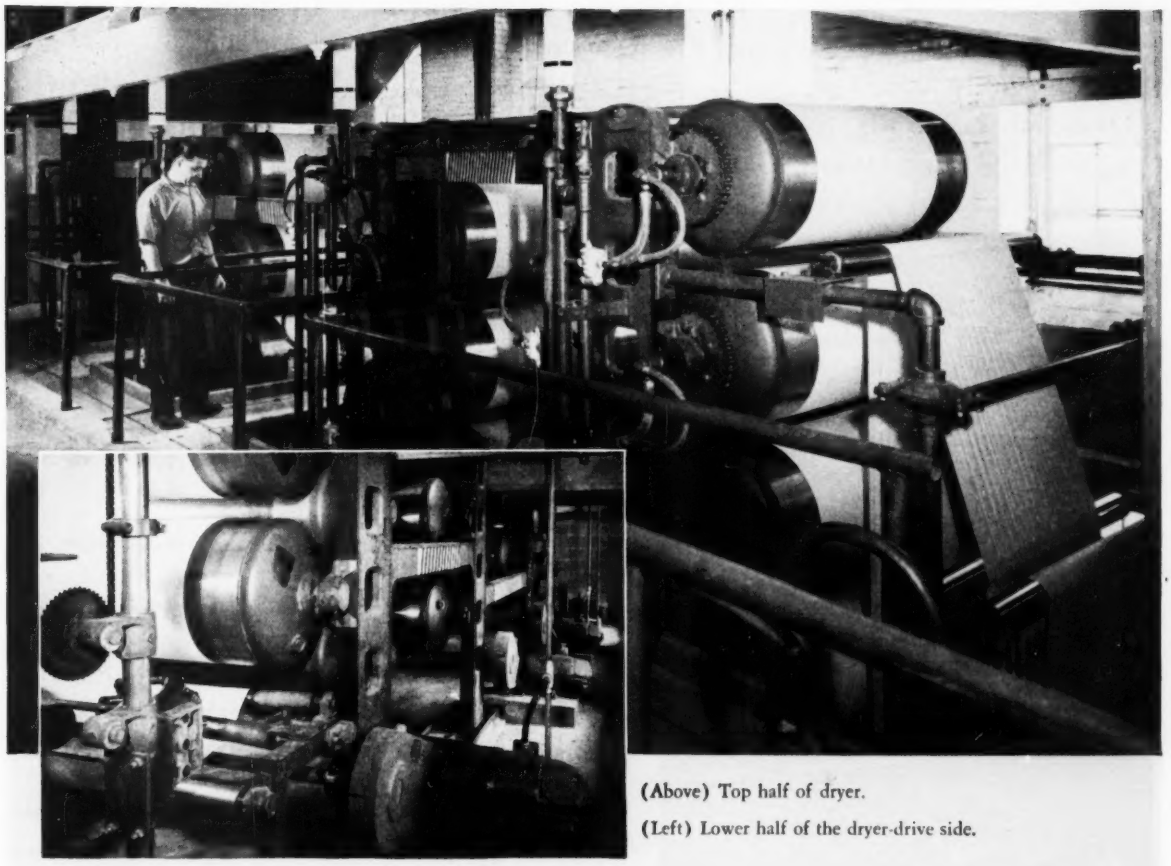


For further information, write Fabric Development Dept.

Coloray and white rayon staple are produced in Courtaulds' new plant at LeMoyne, Alabama. 13 basic colors are available in these deniers and staple lengths: 1½ denier — 19/16" staple, 3 denier — 2" staple.

COURTAULDS, INC. *first name in man-made fibers, first name in solution-dyeing*

600 Fifth Avenue, New York 20, N. Y. • Greensboro, N. C. (P. O. Box 1267) • LeMoyne, Alabama



(Above) Top half of dryer.

(Left) Lower half of the dryer-drive side.

This 40-can Dryer Operates at 250 ypm and features

SMOOTHER CYLINDERS

The new seam-welding technique employed at the Butterworth plant produces smoother cylinders than ever before. New precision machinery for both coded and uncoded cylinders is now in use. Modern equipment and increased production capacity mean better machinery and deliveries on schedule.

When you specify Butterworth, you get drying equipment that is engineered to meet your specific requirements and conditions . . . such as weight of cloth, moisture content, and dryness desired. Furthermore, you get a specially engineered installation at a competitive price.

Take your choice of copper or stainless steel cylinders . . . vertical or horizontal arrangement . . . fabricated or cast-iron columns . . . gear or sprocket-and-chain drive.

And whether you need a small battery of cylinders or a complete drying installation — let us send a Butterworth engineer to your mill with facts and figures on new Butterworth Dryers.

H. W. BUTTERWORTH & SONS CO.
Bethayres, Pennsylvania

1211 Johnston Building, Charlotte, North Carolina
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Machines for Bleaching, Boiling-Out, Dyeing, Mercerizing, Finishing & Embossing : : Pot Spinning Machines for Synthetic Fibers : : Calender Rolls : : Tenter Chains

TEXTILE MACHINERY EXHIBITION — ATLANTIC CITY, APRIL 26-30, 1954 — AMERICAN ASSOCIATION

BUTTERWORTH

Automatic Winders for Rewound Filling

to take advantage of large package spinning, more yarn on filling bobbins, more uniform bunches, better weaving bobbins, and inspected yarn, all of which go to make a better fabric.

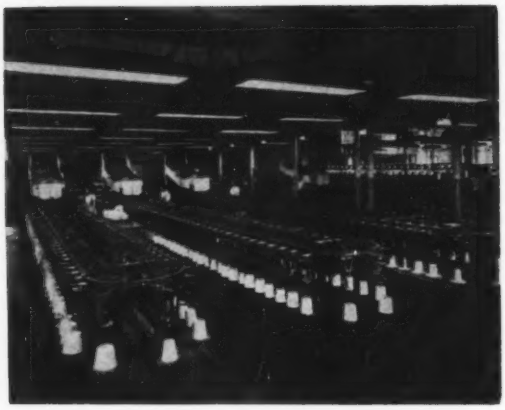
TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION ATLANTIC CITY APRIL 26-30 1954

Abbott Traveling Spindle Package Winders

Automatic Cone or Tube Winders for warping, dyeing, twisting, quilling, sales.

Can be equipped with any one of a variety of slub catches and inspection devices.

Production up to 1000 bobbins per hour per operator.



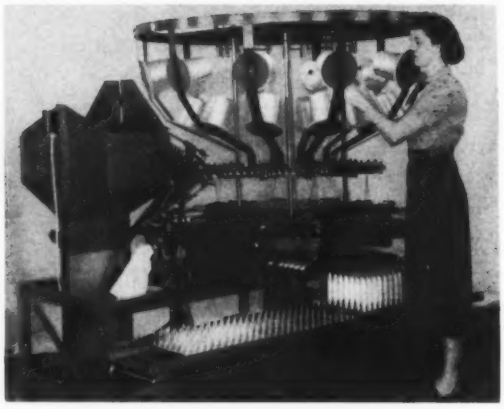
Abbott Traveling Spindle Automatic Quillers

For winding cotton, spun rayon, worsted, etc., equipped to doff automatically into baskets, or stack automatically into boxes.

For rewinding woolen yarn from mule and ring frames.

For winding filament rayon and nylon, etc., with automatic pinboard attachment or wide belt inspection conveyor.

Production up to 2000 bobbins per hour per operator.



Abbott Fully Automatic Radial Quiller

For smaller lots and widely diversified mills.

For winding cotton, spun rayon, filament rayon, worsted, wool, etc.

Can be arranged to deliver bobbins to Pinboard Attachment, or into baskets, or onto wide belt conveyor.

One operator can run several machines producing up to 2000 bobbins per hour per operator.

Can be equipped with measured yardage device for two-shuttle looms.

ABBOTT MACHINE CO., INC.

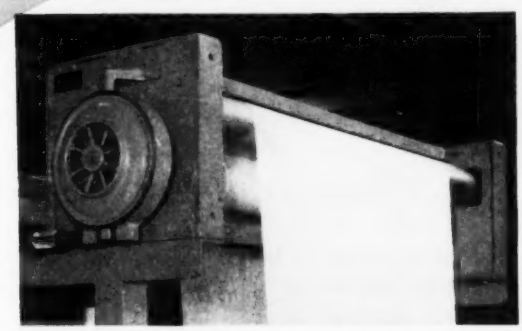
WILTON, NEW HAMPSHIRE

SOUTHERN SALES AND SERVICE: GREENVILLE, S. C.

Mount Hope CLOTH HANDLING DEVICES

Open Width Tension Device Maintains Constant Tension

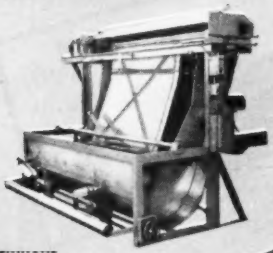
ON WET OR DRY APPLICATIONS, WILL NOT FRAY GOODS OR REMOVE FINISH FROM CLOTH



PRECISION GUIDERS

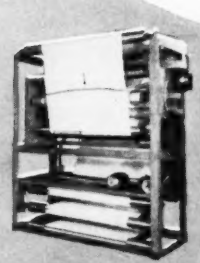
OPENING EQUIPMENT

FREE WHEELING EXPANDERS



CONTINUOUS ROLL FEEDS

OPEN WIDTH TENSION DEVICE



WEFT STRAIGHTENERS

Be Sure To See It in Our Running Demonstration at
Atlantic City, BOOTHS 370-371, A.T.M.A. Exhibition, April 26th thru 30th

ADVANTAGES

1. No jerk or chatter on wet goods — no fraying.
2. No rub marks — no bars to cause them.
3. Unlike bar or rack, will not scrape or wipe out finish from fabric while under tension.
4. Minimum maintenance, easily cleaned and washed when changing shades, rolls cannot rust.
5. Small, compact, easily installed anywhere with only 4 bolts.
6. Easily adjusted for any required tension, can easily duplicate tension without guesswork.
7. Maximum life — heavily welded steel housing, extra-heavy welded rolls, ball bearing mounted, long-lasting air cooled brake.

This device maintains smooth constant tension of any fabric, including fiberglass, on coating machines, calenders, short and long tenter frames, printing machines, continuous drying machine operations, anywhere accurate guiding and width control are required.

Meet Us at the Show!

MOUNT HOPE MACHINERY COMPANY

15 FIFTH STREET • TAUNTON • MASS.

The A B C of WARP TYING

TITAN

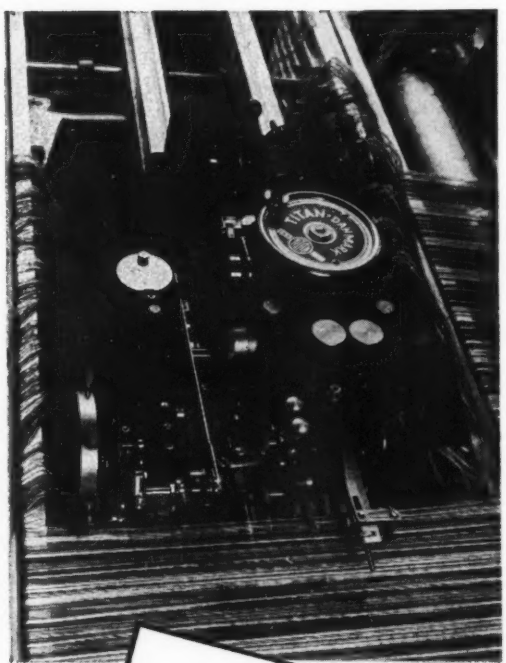
THE NEW, IMPROVED *Tying-In Machine...*

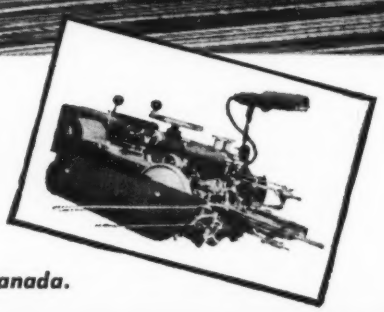
AVAILABLE IN THREE MODELS:

A. GK-6A for tying leased and/or unleased warps, equipped with the new automatic patented DETECTOR to effectively control the lease.

B. GK-6B, the same sturdy universal model as GK-6A without the DETECTOR.

C. GK-6C for tying unleased warps.





Features:

- A streamlined precision machine.
- Simply designed for ease of operation.
- Used for portable and/or stationary tying.
- Multi-frame setup with one tying head.
- Ties entire width of any warp in one continuous operation.
- Unmatched speed and economy.
- Saving in loom down-time.
- Tied knots visibly suspended and accessible.
- All straight, perfect weaving warps.
- Double control of selected ends.

The TITAN *Selector*—the new invention which completely revolutionizes drawing-in.

The EXCELSIOR *Reed Grinder and Brusher*—the inexpensive, competent equipment that saves time and money.

Visit our Booth Nos. 874, 875, 880, and 881 at the *American Textile Machinery Exhibition*, Atlantic City, N. J., or write for further information and descriptive literature.

General Agents for U.S.A. and Canada.

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EDDA INTERNATIONAL CORP.

468 FOURTH AVE., NEW YORK 16, N. Y. CALHOUN TOWERS, GREENVILLE, S. C.

Marquette roller bearing spindles

with FULL-FLOATING FOOTSTEP BEARING

for Cotton, Synthetics, Wool and Worsted

The above figures represent some installations of Marquette Roller Bearing Spindles. In certain mills they were purchased to modernize old frames; in other mills they were specified on new frames. They save power, save tapes, save lubricant, and require less maintenance. They operate efficiently at high speeds, with large packages. Result: *More yarn at lower cost.*

We'll be glad to prove the advantages of Marquette Roller Bearing Spindles in *your* mill. For a test installation, contact our home office or one of our representatives.

The Marquette METAL PRODUCTS COMPANY

CLEVELAND 10, OHIO • SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

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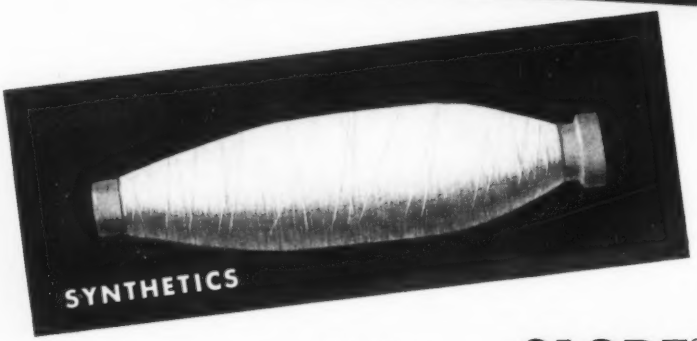


Why a GLOBE® Gum is a preferred size for spun rayon, spun rayon blends and synthetics

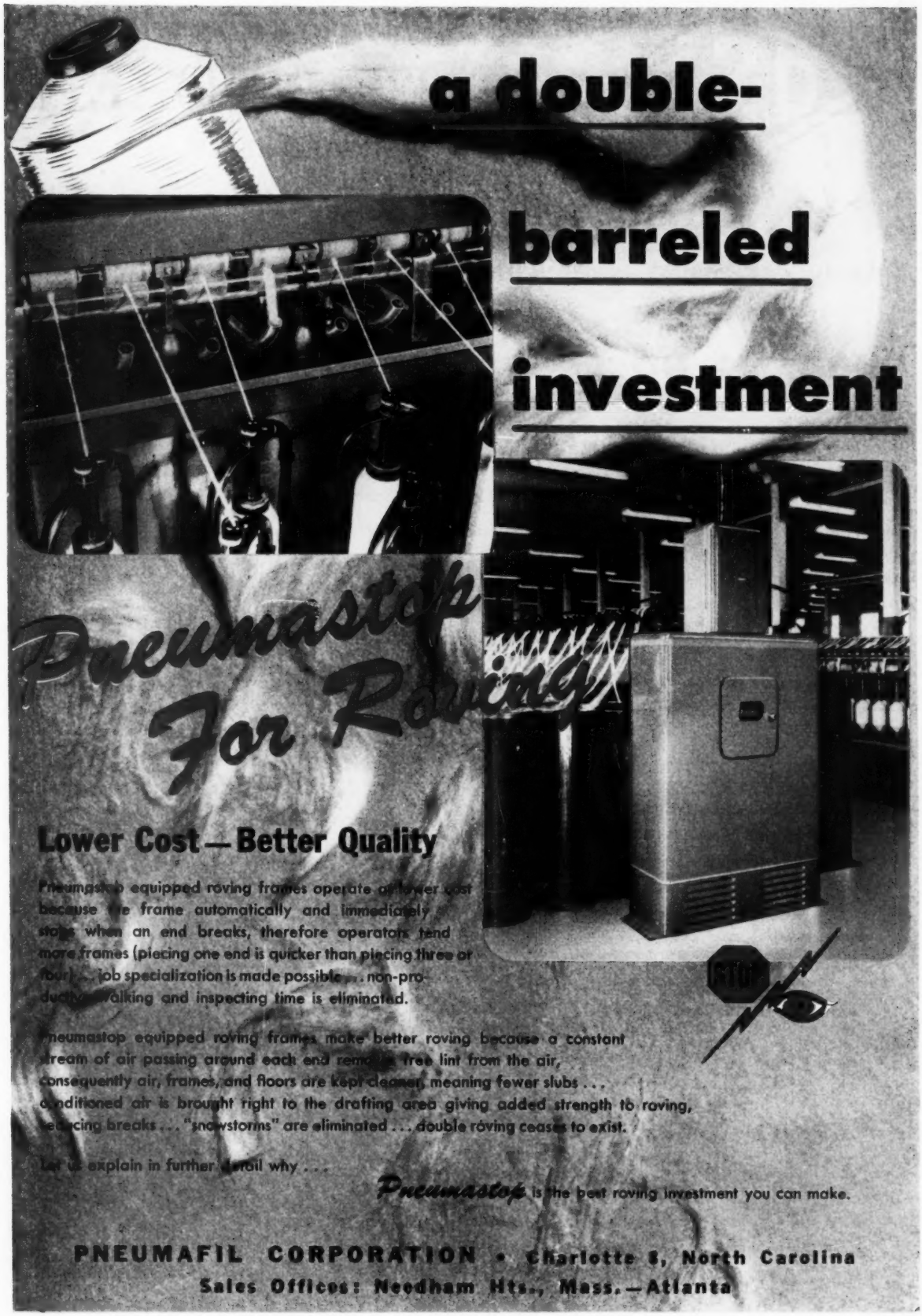
Especially developed for sizing spun rayon and blends of spun rayon, Globe Brand Gum de-sizes readily. It forms a smooth, tough size that eliminates considerable breakage on the slasher and loom. Globe Gum delivers the size concentration you require due to its greater uniformity and stability of viscosity.

Globe Gum is manufactured under rigid controls to meet your size requirements exactly.

Free technical service . . . Our technical staff welcomes the opportunity to help you solve your production problems. No cost or obligation on your part. Write today.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.

For more information, write direct or use Reader Service post card.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barreled
investment
Pneumastop
For Roving
Lower Cost—Better Quality
Pneumastop equipped roving frames operate at lower cost because the frame automatically and immediately stops when an end breaks, therefore operators tend more frames (piecing one end is quicker than piecing three or four) . . . job specialization is made possible . . . non-productive walking and inspecting time is eliminated.
Pneumastop equipped roving frames make better roving because a constant stream of air passing around each end removes free lint from the air, consequently air, frames, and floors are kept cleaner, meaning fewer slubs . . . conditioned air is brought right to the drafting area giving added strength to roving, reducing breaks . . . "snowstorms" are eliminated . . . double roving ceases to exist.
Let us explain in further detail why . . .
Pneumastop is the best roving investment you can make.
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NOVARA, ITALY

WORSTED MACHINERY

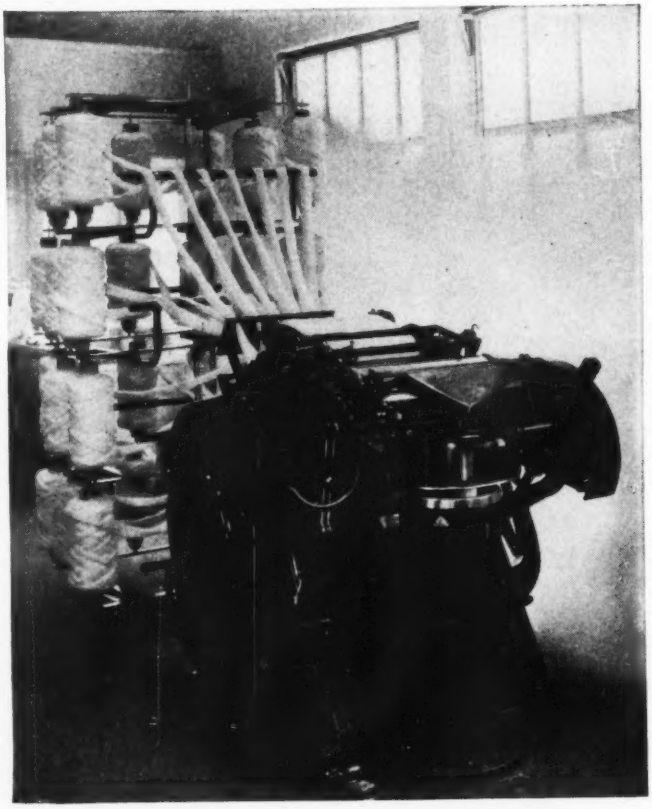
GILLING — COMBING — REDUCING — ROVING — SPINNING — TWISTING

30 years' experience — Highest Quality — Prompt Service

"THERE IS NO SUBSTITUTE FOR COMBING"

The rectilinear Combing Machine SANT' ANDREA Model PSL for wool, schappe (silk waste), ramie, artificial and synthetic fibres, etc., has been developed according to a new and original design. This machine realizes the combing process by means of a special translating movement of the feed carriage, the delivery carriage remaining fixed. A slight curvilinear movement of the feeding nippers around the circular comb insures a softer combing and a higher output. The normal working speed is 110-115 strokes per minute. The actual production per hour is 20-40 lbs., according to the type of raw material processed.

Officina Meccanica Sant' Andrea Novara S.p.A., or their agents remain at the entire disposal of their customers, for the submission of catalogues and detailed information.



NEW SANT' ANDREA COMB MOD. PSL

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TEXTILE MACHINERY AMERICAN ASSOCIATION EXHIBITION ATLANTIC CITY APRIL 26-30 1954

You are cordially invited to visit us at Booth No. 830-832

Chicken Feed ?

...not the way one mill looked at it

When did you last figure the annual labor costs of oiling one plain bearing in your mill? The figure shown above came from a leading textile manufacturer . . . and it doesn't include the cost of lubricant or material spoilage. Just multiply this figure by the number of bearings involved, times the years of service . . . and you'll agree the sum total doesn't represent "chicken feed." What can be done about the problem? See us at the American Textile Machinery Exhibition in Atlantic City (BOOTHS 252-253) and get the answers. Learn what we did to improve conditions for the manufacturer in question. Maybe we can do the same for you. The Fafnir Bearing Co., New Britain, Conn.

Fafnir Plya-Seal Ball Bearing, in which synthetic rubber washers, held in place by spring steel retaining rings, make the most perfect seal ever attained for ball bearings . . . locking in lubricant and shutting out dirt and moisture.

Fafnir Treadle Roll Ball Bearing Unit equipped with Plya-seals. Carefully prelubricated at the factory with the correct amount of specific lubricant to resist high humidity and oxidation. Sizes for all standard makes and models of looms.

TEXTILE MACHINERY EXHIBITION
AMERICAN ASSOCIATION
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FAFNIR
BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

The SMM ROLLER-BEARING SPINDLE

FOR ALL TEXTILE FIBERS—SYNTHETIC OR NATURAL Reg. U.S. Pat. Off.

For Higher Efficiency and Greater Economy

Flexibility without the least friction; therefore, no dirtying of oil.

Exclusive oil cushioning. Very gentle and very effective.

Note its important advantages!

- **One oil filling is sufficient for 20,000 or more Hours (5 years at 2-shift basis)**

- **Change of oil, including cleaning, done within fraction of a minute by means of this simple appliance. Removing or dismantling of spindle-bolster not necessary.**
- **No edge pressure on the rollers, roller-bearing and footstep being always perfectly aligned.**
- **Built for any kind of bobbin for any purpose.**

TEXTILE MACHINERY EXHIBITION — ATLANTIC CITY APRIL 26-30 1954 — AMERICAN ASSOCIATION

Visit us at BOOTH 1024

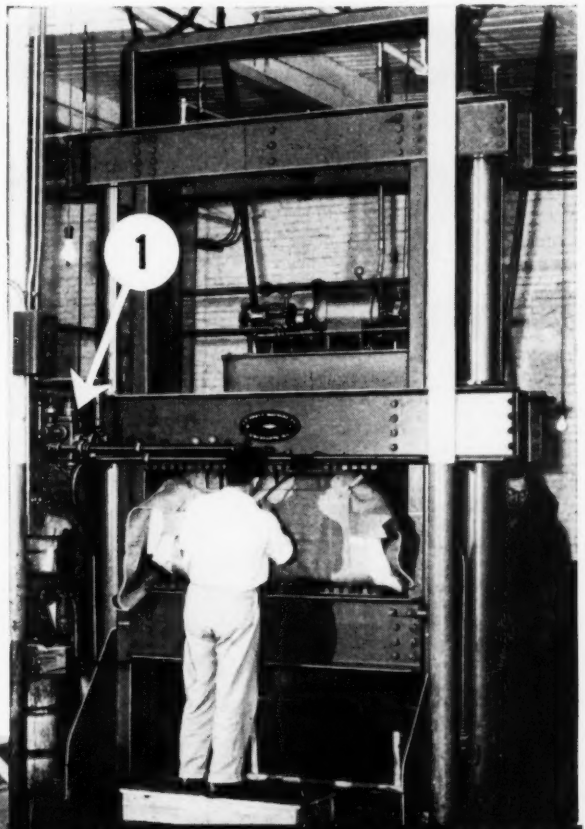
SPINDLES, MOTORS AND MACHINES LTD. *USTER, SWITZERLAND*

NORTH AMERICAN REPRESENTATIVE

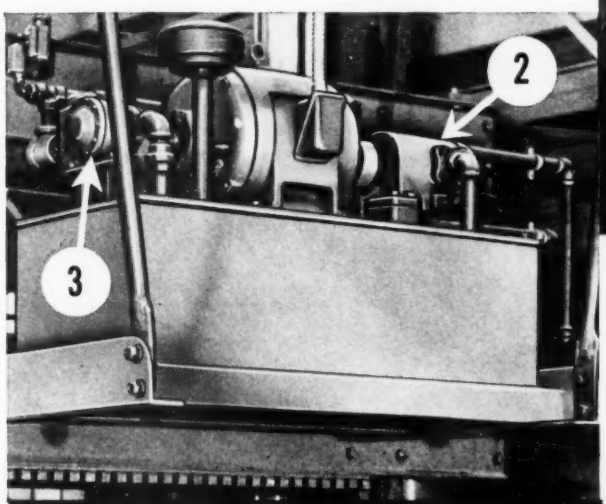
GUBELIN INTERNATIONAL CORPORATION • 35 West 53rd Street • NEW YORK 19, N. Y.

Southern Rep.—H. Phil. Worth, P. O. Box 1555, Greenville, S. C.

VICKERS®
HYDRAULIC EQUIPMENT
helps produce
BETTER BALES at *LOWER* COST



Beaty One-Floor Draw Bar Hydraulic Presses need no pit, are self-contained, complete more bales per hour, require less electric power, and the bales contain greater yardage of cloth. VICKERS Hydraulic Equipment is used exclusively. Press operation is conveniently controlled by hand lever on VICKERS 4-Way Valve (No. 1).



VICKERS Custom-Built Hydraulic Power Unit was designed and built to meet the particular needs of this press. A double-end motor drives two standard VICKERS Vane Type Pumps (No. 2 a small-volume pump for maximum operating pressure of 2000 psi; No. 3 a large-volume pump for maximum operating pressure of 1000 psi.) Both pumps deliver oil for the exceptionally fast closing of the press; during bale compression at 2000 psi, pump No. 3 is automatically unloaded to reduce power requirement to a minimum.

The advantages of using VICKERS Hydraulic Equipment as illustrated here by the Beaty Press are representative of what has been accomplished on many types of Textile machinery.

In the Textile industry, the use of Vickers Hydraulics is growing rapidly because of its adaptability, efficiency and economy. It offers exceptional advantages in simplification of design, ease of installation, accuracy and flexibility of control, and low maintenance. Automatic overload protection and inherent self-lubrication are additional highly desirable characteristics.

For further information about the benefit of Vickers Hydraulics ask our nearest Sales Application Engineering Office for a copy of new Textile Bulletin 54-66.

VICKERS Incorporated
DIVISION OF THE SPERRY CORPORATION
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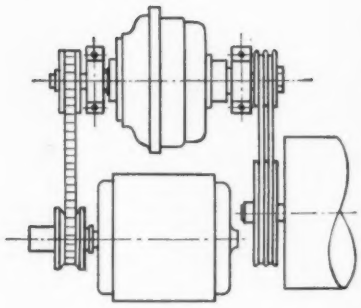
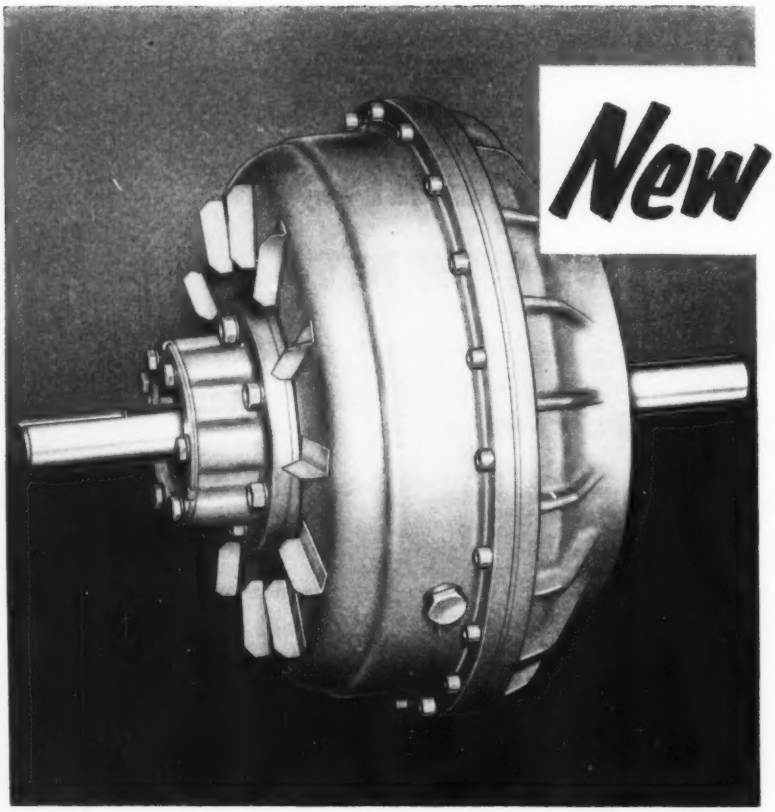
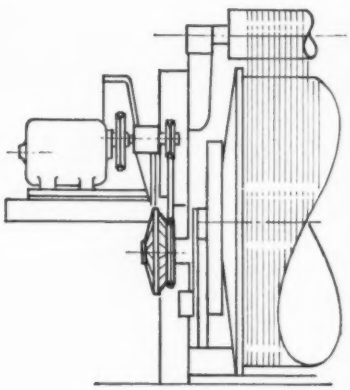
ENGINEERS AND BUILDERS OF OIL HYDRAULIC EQUIPMENT SINCE 1921

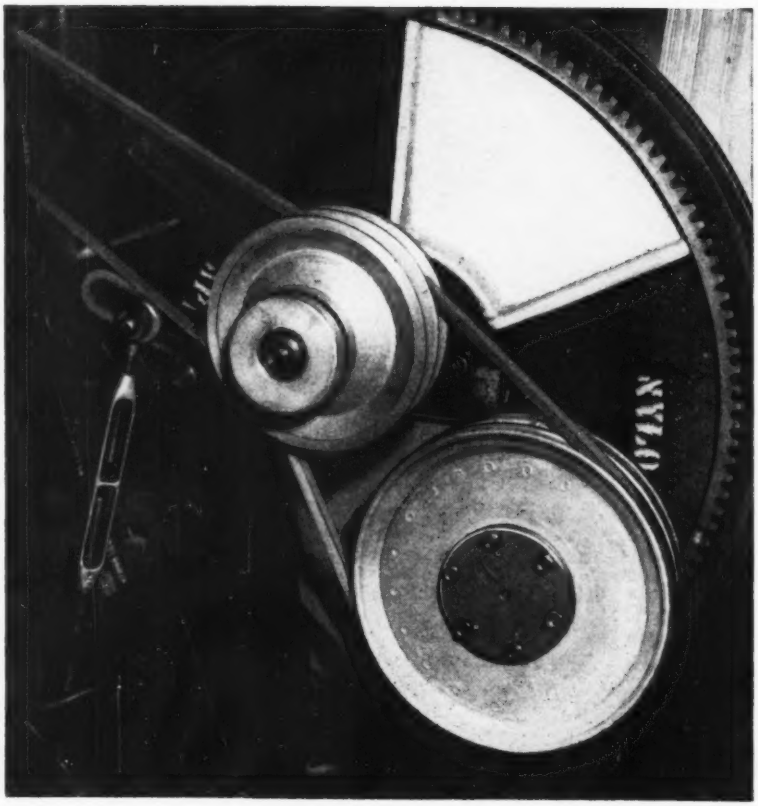




New Hydro-Wynd®

High-level quality and steadier production are provided by newly-designed 12.2 and 8.4 HYDRO-WYNDS. Incorporating fluid coupling with planetary gear set, HYDRO-WYND automatically maintains predetermined tensions, while roll rpm decreases and roll diameter increases. Errors from manual adjustment, winding stoppages, variations in tension are eliminated. New design features include rearrangement of gear train, increased bearing capacity, new carbon-against-Meehanite spring-loaded seal—plus larger capacity in Model 12.2.





New Hydro-Tensor

A completely new loom let-off, the HYDRO-TENSOR automatically maintains uniform tension from full to empty beam; relieves tension in warp during shut-downs, reducing end-breakage and minimizing start-up marks; dampens inertia effect of warp beam, particularly important with synthetic fibers; provides regulation of warp tension from high to low range, with one simple adjustment; permits unlimited positioning of cloth fell and re-establishment of initial weaving tensions; provides infinitely variable pick range. Combines fluid coupling drive with unitized arrangement of V-belt and chain drives. *Easily installed,* using existing loom motor.

Textile Machinery Drives

both friction and fluid . . . offer more efficient automatic control at less cost

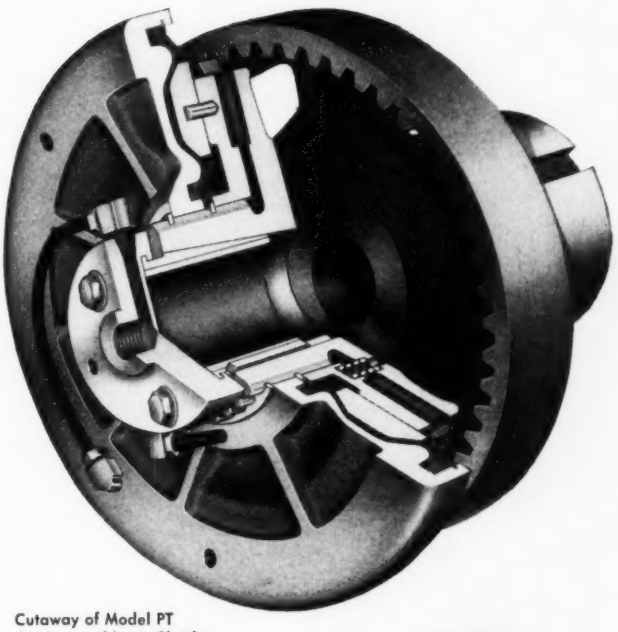
IF YOUR JOB is supervision, maintenance, or design of textile machinery—chances are you're constantly searching for more simple, more efficient automatic control to improve product quality and reduce operating costs.

THAT'S WHY YOU AND YOUR COMPANY will both profit by investigating these completely new textile machinery drives . . . developed by the pioneer in the industrial drive field: Twin Disc Clutch Company.

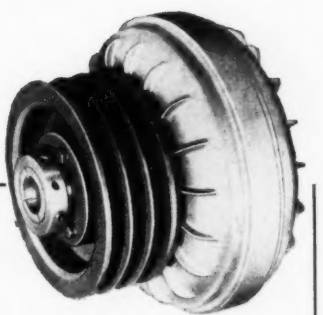
The new HYDRO-TENSOR—the new Model PT Loom Clutch—and the newly designed HYDRO-WYND Drives were developed to answer the need for packaged automatic control . . . with rugged, simple construction—easy operation—and installation adaptability to either new or existing machines.

New Air-Actuated Loom Clutch

Designed specifically for looms, the new Model PT Air-Actuated Loom Clutch improves quality of cloth by assuring proper control of pick. Completely eliminates need for adjustment. Operated by direct air-pressure; self-compensating for wear. Capacity is in direct proportion to air-pressure applied. Simple push-button control provided, from single or multiple stations. Compact and rugged in construction—assures long working-life with low maintenance. Tapered sleeve hub construction accommodates minor variations in shaft size, making the PT readily applicable to existing looms.



Cutaway of Model PT Air-Actuated Loom Clutch.



HYDRO-SHEAVE Drive, for motors from 3/4 to 50 hp.

TWIN DISC
CLUTCHES AND HYDRAULIC DRIVES

TWIN DISC

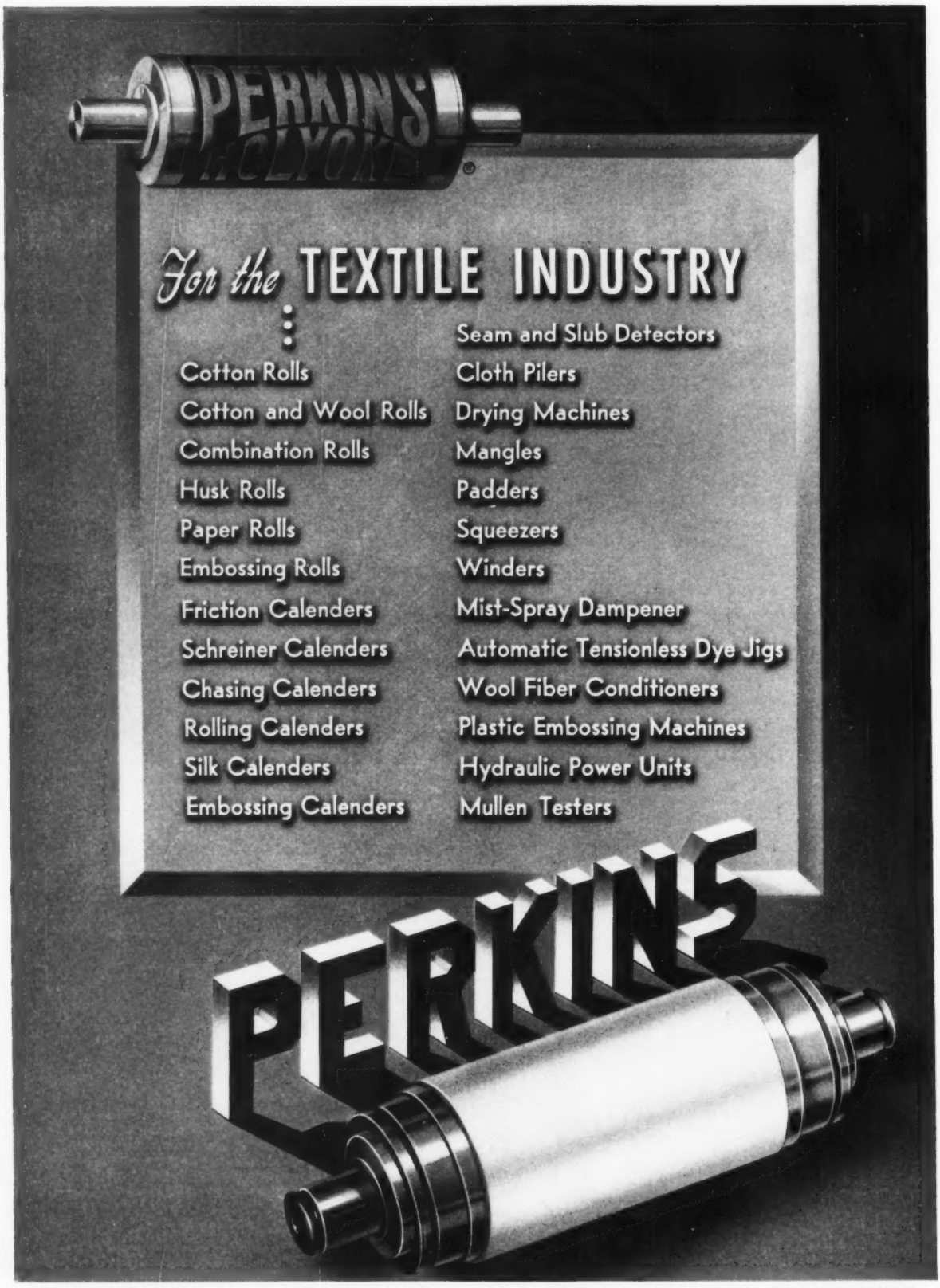
Hydro-Sheave® Drive

See them at the SHOW booths 706, 707

No discussion of Twin Disc Drives for textile machinery would be complete without mentioning the Twin Disc HYDRO-SHEAVE—the complete fluid power transmission package—already in wide use throughout the textile industry. Solves problems of heavy starting, motor burn-outs, and uneven operation. For motors from 3/4 to 50 hp.

FOR COMPLETE INFORMATION ON ANY OF THE NEW TEXTILE MACHINERY DRIVES, WRITE TO TWIN DISC, DEPT. DS, RACINE, WISC.

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • Hydraulic Division, Rockford, Illinois



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BOOTHS 124 to 129

a new, low-cost HEADLESS PACKAGE twister

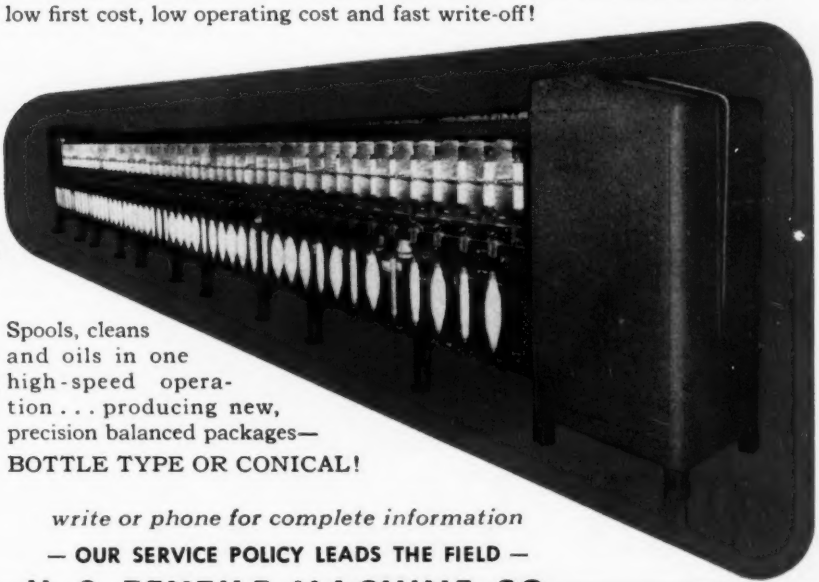
with new shock-proof traverse motion

available with *stationary mandrels to handle paper tube packages!*

NEW U.S. ACME

JUMBO DOUBLE-DECK TWISTER

A NEW, NARROW-WIDTH COMBINATION MACHINE that builds over-wind or under-wind packages from STRAIGHT, CONICAL or BOTTLE-TYPE SUPPLY PACKAGES! Here's a twister that gives you low first cost, low operating cost and fast write-off!



the new SHORT-CUT METHOD pair!

U.S. ACME

VERTICAL SPOOLER

Spools, cleans and oils in one high-speed operation . . . producing new, precision balanced packages— BOTTLE TYPE OR CONICAL!

write or phone for complete information

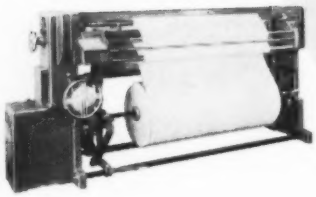
— OUR SERVICE POLICY LEADS THE FIELD —

U. S. TEXTILE MACHINE CO.

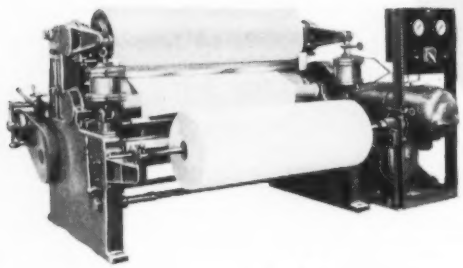
SCRANTON 8, PENNA.

IN THE LIMELIGHT

Yes, Van Vlaanderen processing equipment is certain to be in the limelight this month at the American Textile Machinery Exhibition.* Van Vlaanderen will present three brand-new machines in their big eight-booth display of advanced design dyeing and finishing equipment. These stars of the show will soon take their place beside other topnotch performers of the V.V. line in up-to-date plants throughout the country. Alert plant managers know that these machines deliver longer trouble-free service, better production and higher quality work.



THE DYEMASTER. This versatile new jig will handle any fabric from tender sheers to ducks. Cloth tension remains as preset end after end. Near-constant cloth speed is assured by a special differential transmission. The Dyemaster features automatic reversing 15" brakes, power loading and unloading, totally enclosed transmission and chains and a cushioned oscillating expander.



V.V. COMBINATION FRICTION AND ROLLING CALENDER. This advanced unit gives up to 40 tons pressure as a friction calender and 80 tons as a rolling calender. The degree of friction is variable and special controls allow operator to determine friction accurately. The 16" chrome-plated, chilled-iron top roll is gas-heated and equipped with automatic temperature control. Center roll is 22" cotton and bottom 20" chilled iron. Face is 65". The speeds of top roll and lower pair of rolls are controlled separately by D.C. variable speed units. A special device prevents cotton roll from "running wild". Other features are: herringbone reduction gears in main drive to carry large loads safely, 11½" rams and massive box-type frames.

V.V. EMBOSSING MACHINE. This new 20 ton pneumatic set embosser is designed and constructed for long trouble-free service and high production. The 11" diameter engraved roll is gas-heated and has a 50" face. Temperature is automatically controlled. Special herringbone timing gears of ample size assure perfect register of embossing rolls. Rolls are mounted on spherical roller bearings, the upper lubricated by a pressure cooling and filtering unit. The machine has a variable-speed drive and closely grouped controls for easy operation. Other features include easy removal of rolls, a nip guard and exclusive V.V. center-bar locks.

Van Vlaanderen will be glad to arrange for you to see any of these machines in action. Call on us.

Illustrated at left are the V.V. Tuber, V.V. Heavy Duty Padder and the Dyemaster Jig.

VAN VLAANDEREN MACHINE COMPANY

MACHINE COMPANY

370 Straight Street, • Paterson 3, New Jersey

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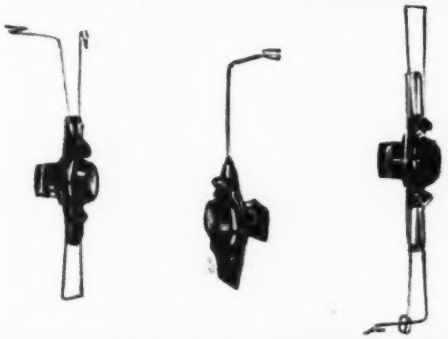
WORLD'S LARGEST MANUFACTURER OF MACHINES FOR PROCESSING MODERN FABRICS

How You Can Produce

HELANCA YARNS

AT PROFITABLE SPEED!



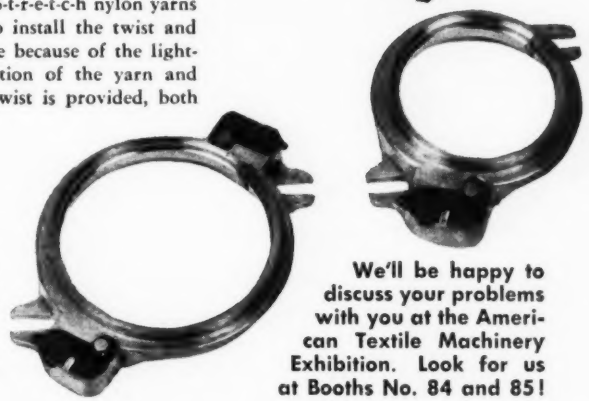
WITH SPECIAL HERR LIGHTWEIGHT FLYERS

Just as others are doing, you can make those famous HELANCA S-t-r-e-t-c-h nylon yarns at profitable speeds! Special Herr flyers have been designed to install the twist and special flyers to back the twist out. Increased speeds are possible because of the lightweight construction and nylon bearings which balance the action of the yarn and reduce the bearing contact on the spindle. Perfect control of twist is provided, both when installing and backing out.

WITH HERR CONICAL RINGS

Herr Conical Rings have controlled lubrication, which means clean yarn . . . ordinarily a difficult attainment when handling spongy yarns such as Helanca. Herr Conical Rings are also popular because they stop yarn breakage, permit heavier doffs and produce smoother yarn.

Herr Flyers and Conical Rings are indeed the ideal combination for producing Helanca and other stretch yarns profitably!



We'll be happy to discuss your problems with you at the American Textile Machinery Exhibition. Look for us at Booths No. 84 and 85!

Pease send us your literature.

NAME ..... TITLE .....

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ADDRESS .....

CITY ..... STATE .....

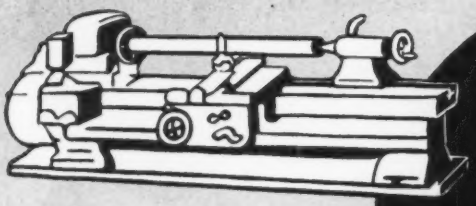
HERR MANUFACTURING CO., INC.

309 FRANKLIN STREET, BUFFALO 2, NEW YORK

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON AND BLENDED YARNS OF ALL TYPES

COTTON, spun rayon, and wool

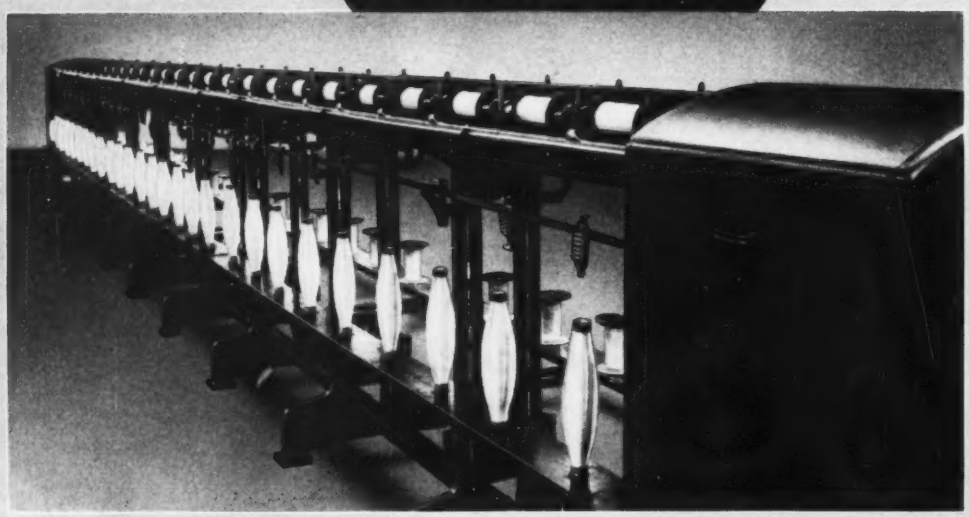
WE TOOK THE LATHE PRINCIPLE AND APPLIED IT TO WINDING



RESULT...

THE NEW *Fletcher*

SPEEDEX WINDER



winding speeds over 1,000 yards per minute with true vibrationless rotation of bobbins

CAN MAKE:

Conventional spools up to 8″ traverse

Taper top spools for twisting or warping

Double taper tube for shrinking or shipping

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION

COME TO ATLANTIC CITY AND SEE THE MOST FLEXIBLE WINDER EVER BUILT

FLETCHER WORKS

223 GLENWOOD AVE. PHILADELPHIA 40, PA. ESTABLISHED-1850

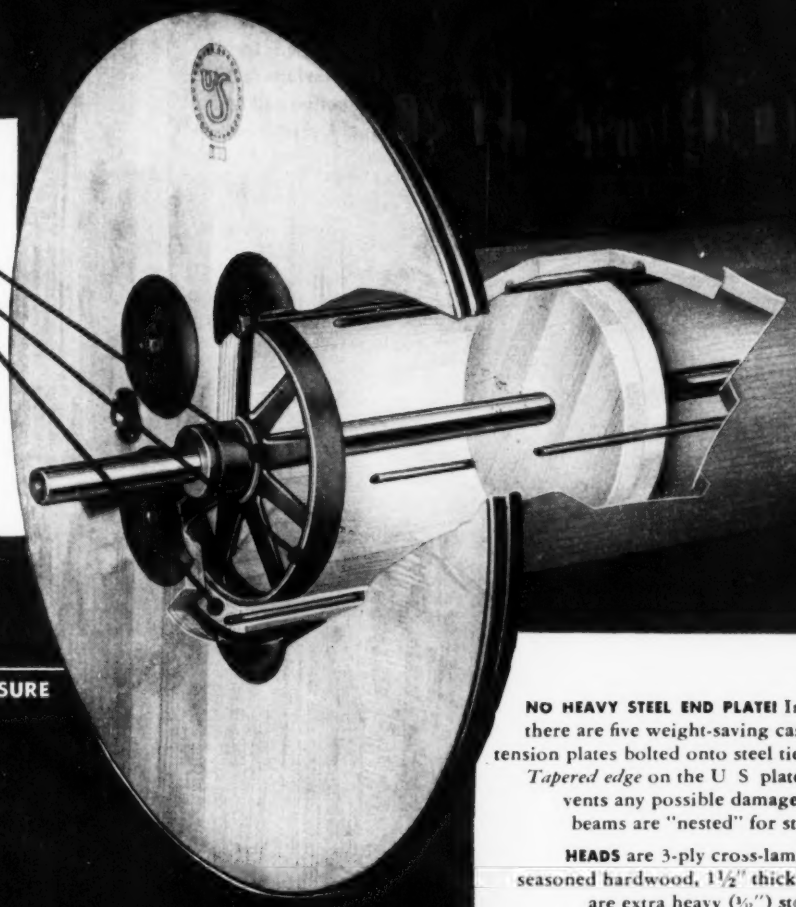
***Southern Representative*—F. W. Warrington, Johnston Bldg., Charlotte, N. C.**

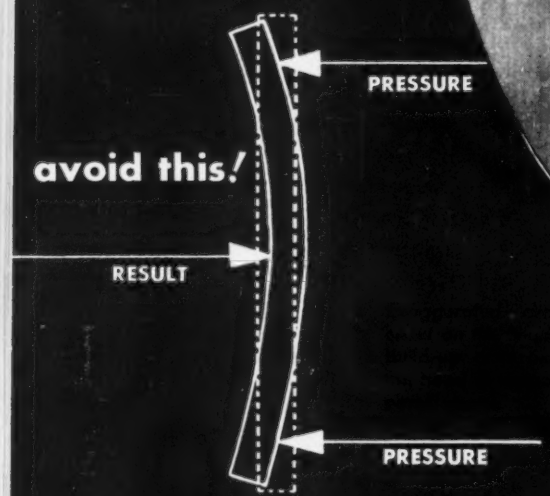
COTTON...spun rayon...and wool

3-POINT SUPPORT FOR THE BEAM HEAD

shoulder at hub of casting
periphery of casting
ends of staves

U S Warper Beams are *all* built with 3-point support, which provides additional resistance against outward deflection during build-up of the beam.





NO HEAVY STEEL END PLATE! Instead, there are five weight-saving cast iron tension plates bolted onto steel tie rods. *Tapered edge* on the U S plates prevents any possible damage when beams are "nested" for storage.

HEADS are 3-ply cross-laminated seasoned hardwood, 1½" thick. *Tires* are extra heavy (½") steel . . . grooved, heated and shrunk-fitted onto the heads for tighter assembly. Eastern pine barrel staves are supported at each end by round cast iron supports.

U S BOBBIN & SHUTTLE CO.

Manufacturing Plants
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General Sales Office LAWRENCE, MASS.
Southern Division Headquarters 1912 Augusta Rd., GREENVILLE, S. C
CHARLOTTE, N. C. JOHNSON CITY, TENN. LaGRANGE, GA.
PHILADELPHIA, PA. PROVIDENCE, R. I. MINNEAPOLIS, MINN.
DALLAS: O. T. Daniel, Textile Supply Co. LOS ANGELES: E. G. Paules, 1762 W. Vernon Ave
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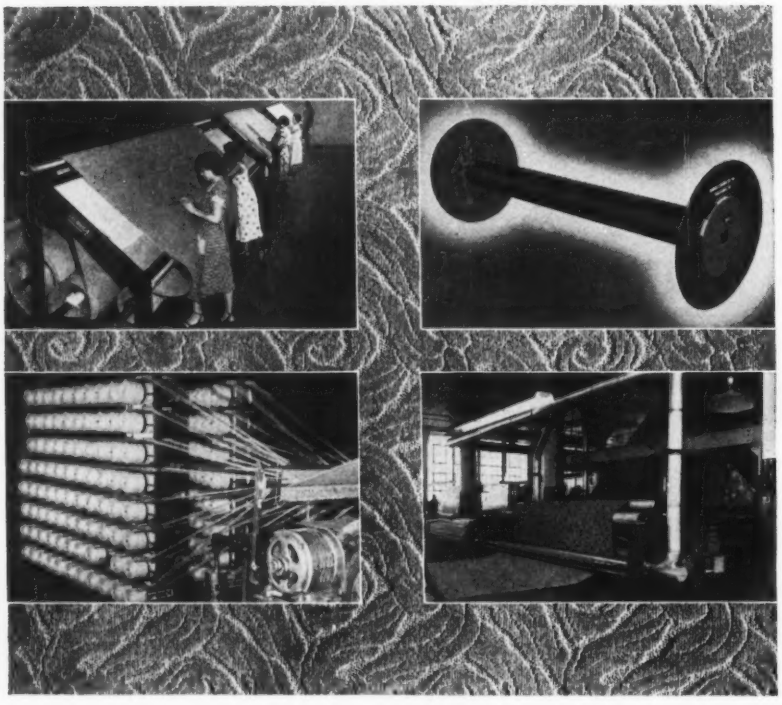
SEND FOR SET OF BLUEPRINTS
and Bulletin CWB
for detailed construction features of U S Warper Beams, Heads and Tension Plates for Cotton, Spun Rayon and Wool.

THE SEAL OF QUALITY AND SERVICE
US
SINCE 1857

A NEW PATTERN IN THE RUG INDUSTRY

An entirely new concept has taken hold in America's leading mills. Ideas, pioneered and perfected by the Edward J. McBride Company, have brought savings in time, money and labor. They have increased production and added greater profits. Here are a few of these developments—

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954



1. *Fully powered burling tables with speed-control and reversible drive permit operators to inspect both sides without lifting rolls of carpet. Mills are reporting inspection costs down as much as 55%.*
2. *Carpet loom beams of all-welded steel construction are designed by McBride to meet your specific requirements.*
3. *Heavy duty rug creels are all-metal, all-welded for strength and rigidity. Designed for weaving from large yarn packages; can be caster mounted or bolted to floor for stationary installation.*
4. *Backsizing machines designed for efficient continuous processing of carpet up to 18 ft. in width.*

LOOK FOR THE McBRIDE BOOTH AT ATLANTIC CITY NEW DEVELOPMENTS FEATURED IN BOOTHS 872-873

In addition to the equipment listed on this page, many other time and money-saving, profit-building developments of the McBride Company will be on display at The American Textile Machinery Exhibition, Atlantic City, N. J.

Sealed Mercury switch stop motions . . . Tension devices that give a new approach to an old problem . . . a section of the McBride monorail magazine creel equipped with the latest in package adaptors for high speed warping creels . . . Universal cone holders which give instant change from cones to tubes without tools or any set screw adjustment . . . new, all-metal beams for warping and weaving. Visit the McBride exhibit to learn how you can add greater savings and increased profits to your operation, whatever it might be.

PART OF THE McBRIDE SERVICE IS TO FURNISH COMPLETE ENGINEERING TO MEET YOUR REQUIREMENTS.

Mc BRIDE

COTTMAN AVE. & WISSINOMING ST.
PHILADELPHIA 35, PENNSYLVANIA

CREELS *for every purpose,* **WARP BEAMS • FLANGES • ROLLS**

NEW versatile Du Pont "CELANTHRENE"* Cerise B for bright pink shades on "ORLON"*, "DACRON"*, nylon and acetate

Here's an amazingly versatile new dye! It's Du Pont "CELANTHRENE" Cerise B—recommended for good light and wet fastness on *all* the hydrophobic fibers.

On type 42 "ORLON" acrylic fiber—Du Pont "CELANTHRENE" Cerise B is particularly valuable on this fiber, where it shows excellent fastness to washing, perspiration, and light.

On nylon—this color builds up well, has good fastness, and yields bluish-pink shades.

On both "DACRON" polyester fiber and acetate—Du Pont "CELANTHRENE" Cerise B is recommended for printing, and shows outstanding strength and freedom from specking.

On "DACRON"—"CELANTHRENE" Cerise B can be applied from benzoic acid, phenolic or other carrier baths, by pressure dyeing without a carrier and by the Thermosol process.

On acetate—the color is level-dyeing with very good buildup properties, and can also be used to produce bright scarlet shades of improved sublimation fastness.

For further information—and for help on any coloring problem—write to E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.

Du Pont Dyes

DU PONT

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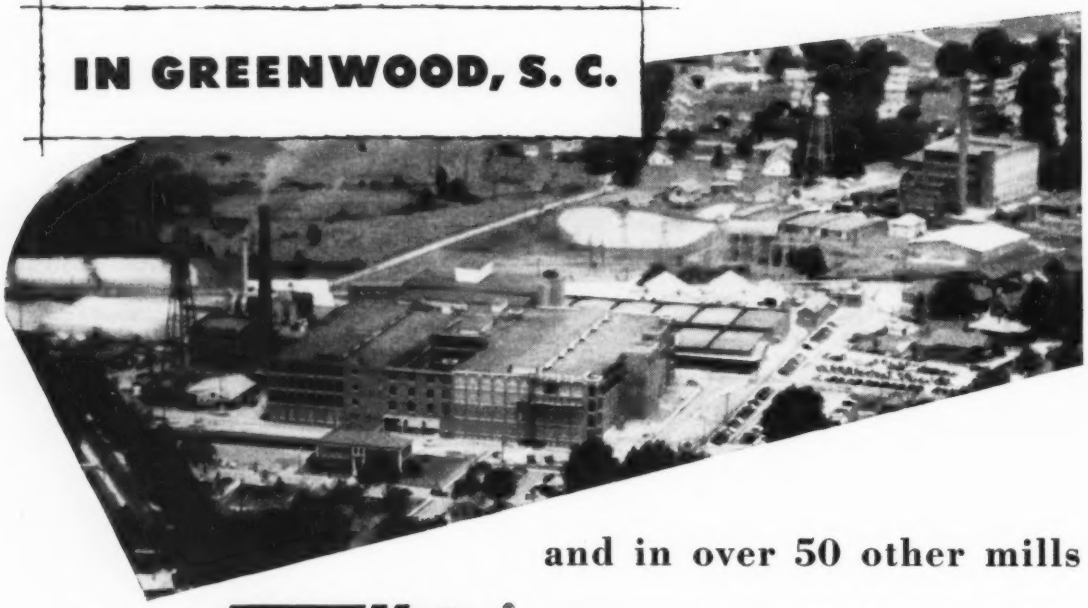
BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

IN GREENWOOD, S. C.

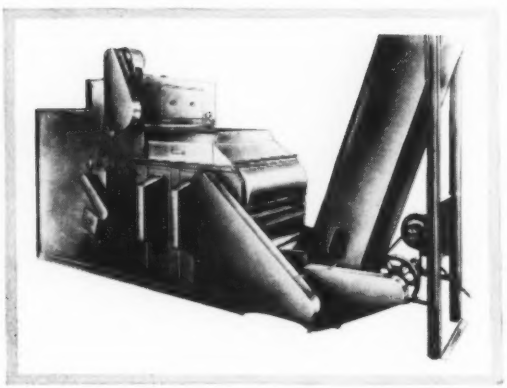


and in over 50 other mills

It's the FiberMeter® Automatic Blending System

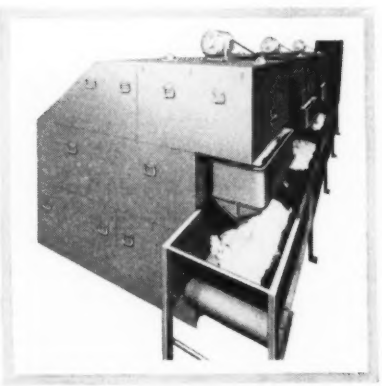
for *Accurate Blending*

and the UniTint for *Uniform Tinting*



No finer testimony could be asked for the recognized leadership of Fiber Meter Automatic Blending and Unitint Tinting than their universal adoption by the great mills in Greenwood, S.C. as well as in over 50 others in the United States, Canada and Europe.

The hundreds of thousands of pounds of fibers being blended and tinted daily in these plants provide effective evidence of the economy, accuracy and dependability of this machinery.



TEXTILE MACHINERY EXHIBITION — ATLANTIC CITY APRIL 26-30 1954 — AMERICAN TEXTILE MACHINERY ASSOCIATION

See these machines BOOTH 601

TEXTILE EQUIPMENT CORPORATION
SUBSIDIARY OF W. D. DOBENHOFF CO., INC.
GREENVILLE, SOUTH CAROLINA

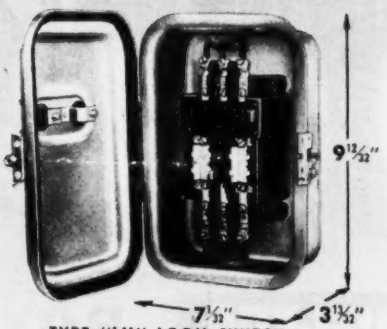
Engineered for the Textile Industry

3 NEW ARROW AH HART DEVELOPMENTS IN MOTOR CONTROL

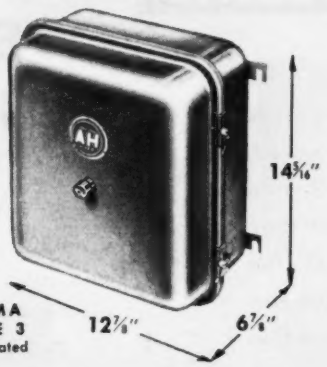
All

OFFERING THESE IMPORTANT ADVANTAGES

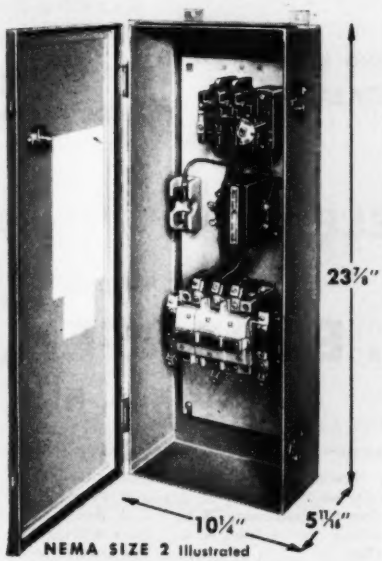
- **DOUBLE PROTECTION AGAINST LINT . . . and other breakdown materials**
- **GREATLY REDUCED FIRE HAZARD**
- **SUPERIOR PERFORMANCE and DEPENDABILITY**
- **LONGER LIFE**
- **SMALLER SIZE and WEIGHT . . . saving valuable space**
- **FASTER, EASIER INSTALLATION and MAINTENANCE**
- **SAFER, MORE CONVENIENT OPERATION**



TYPE "LM" LOOM SWITCH



NEMA SIZE 3 Illustrated



NEMA SIZE 2 Illustrated

TYPE "LM" Loom Switch

Size 0, 3 pole, 2 hp to 600 volts a-c. Completely new, radically different . . . not just an adaptation of a standard switch. Unique, built-for-the-purpose rotary overload mechanism resists shock far in excess of any found in actual loom installations. Fully enclosed switch unit plus lint proof enclosure provides double protection against lint.

NEMA TYPE XII Enclosure for Magnetic Starters

For starter sizes 0, 1, 2 and 3. Used wherever switch ratings exceed 2 hp . . . or remote control is desired. Enclosures with heavy neoprene gaskets protect effectively against lint. Smaller, lighter A-H Type "RA" (Right Angle) Starters provide superior performance, dependability. Vertical contacts offer added protection by preventing accumulation of breakdown material.

NEMA TYPE XII Combination Starter

Smaller and lighter than any other combination starter of comparable rating, the "RAC" offers the advantages of the unique A-H Type "RA" Starter plus the exclusive new A-H "RAD" Disconnect *plus* the all new A-H enclosure that provides full protection against lint and other breakdown materials. Available in Sizes 0, 1 and 2 with fused or unfused disconnect or with circuit breaker.

The Arrow-Hart Controls shown have been designed and constructed throughout specifically for the operating conditions peculiar to the textile industry. Standards for safety, performance and ease of installation and maintenance were determined, met and exceeded in all these Arrow-Hart Motor Controls. Be sure to request a copy of "Electrical Controls for the Textile Industry" . . . complete with product, application and engineering data.

SINCE ARROW AH HART 1890

SEND THIS COUPON TODAY

Your Folder Will Be Mailed Promptly

INDUSTRIAL CONTROL DIVISION

THE ARROW-HART & HEGEMAN ELECTRIC CO.

103 HAWTHORN ST., HARTFORD 6, CONN.

Please send my free copy of "Electrical Controls for the Textile Industry."

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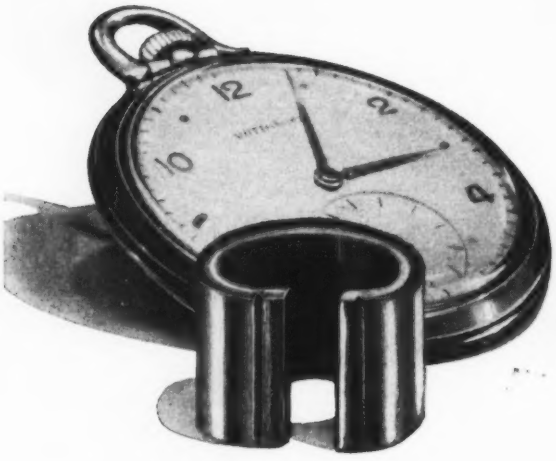
TW-4

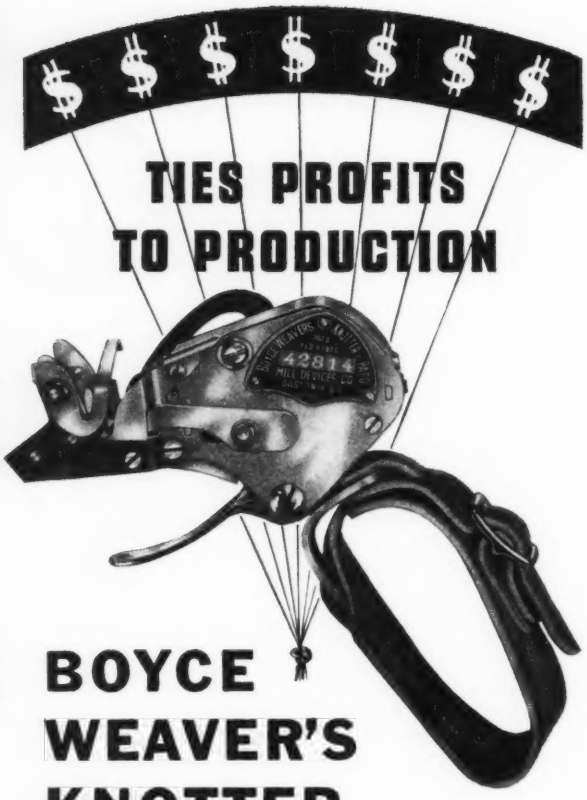
TIME SAVER



CARTER TRAVELERS

Smooth running work with a minimum of ends down is time—and money—saved. CARTER TRAVELERS give you just that, because they are manufactured with the same degree of precision and workmanship found in a fine watch.

The next time—save time and money—with CARTER TRAVELERS.



BOYCE WEAVER'S KNOTTER

The BOYCE WEAVER'S KNOTTER is much more than a mechanical aid to increased production. It is a quality control that contributes materially to other processes and the finished product.

. . . The smooth, fast action with which a BOYCE WEAVER'S KNOTTER ties a perfect weaver's knot and clips the ends clean and even, sets a quality standard from which profits are made.

If you want to meet today's production demands profitably, write for further information.

CARTER TRAVELER CO. **MILL DEVICES CO.**

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION

Divisions of

A. B. CARTER, Inc.

GASTONIA, N. C.

Visit us in our
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American Textile Machinery
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SEE PROFITS BEING PRODUCED!

Watch these new Warner & Swaseys in action at the American Textile Machinery Exhibition

ATLANTIC CITY (APRIL 26 THROUGH 30)

SALES OFFICES

Main Office and Factory: 5701 Carnegie Ave., Cleveland 3, Ohio
61 Rivulet St., North Uxbridge, Mass. 6910 Market St., Philadelphia, Pa.
Candler Building, Atlanta, Ga. 1820 Browning Ave., Charlotte, N. C.

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

MACK BOBBINS
ENGINEERED TO FIT YOUR NEEDS

BUILT TO STAND THE GAFF

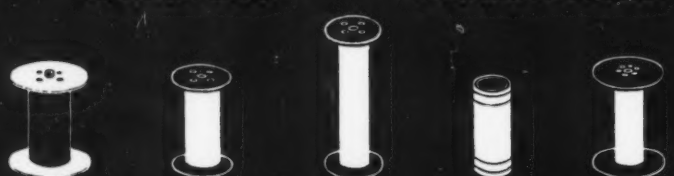
Now more than ever before with the many new types of synthetics it's important that bobbins be designed in every detail to fit specific needs of the user, then built to exacting specifications.

The Allentown Bobbin Works is a custom "shop" on a production line basis. You can have the individual variations your production requires at cost of a "standard" product.

All types of bobbins for fine yarn processing designed and built to fit your needs.

Brass Bushings are now standard for all straight spindle bobbins.

ALLENTOWN BOBBIN WORKS, INC.
ALLENTOWN PENNSYLVANIA



TAKE-UP BOBBIN – BAKELITE BARREL, ALUMINUM HEAD.

WINDER-SPINNER BOBBIN–BAKELITE BARREL AND BUSHINGS, FIBER HEAD.

TWISTER BOBBIN– ALL BAKELITE– BARREL, HEAD, BUSHING.

HEADLESS PACKAGES IN SEVERAL TYPES OF ALL BAKELITE CONSTRUCTION.

SHIPPING BOBBIN – MAPLE BARREL, FIBER HEAD.

WE'RE LOOKING FORWARD

TO SEEING YOU

IN ATLANTIC CITY—BOOTH 567

The Fleet Line

LAXLOOP CONTINUOUS WASHER

PAT. APPLIED FOR

With FREE-LOOP Electri-matic Compensator

FREE-LOOP Electri-matic Compensator, Bar Type — When two loops of cloth complete a low energy electrical circuit by coming in contact with two metal bars, corresponding tubs are synchronized.

FEATURES

A flexible vari-speed machine — stainless steel throughout.

Continuous washing and/or neutralizing of woolens, worsteds or blends at variable speeds.

Fully synchronized from tub to tub, giving tensionless fabrics throughout machine.

FREE-LOOP Electri-matic Compensator (patent applied for) controls DC drive for full automatic control.

Pneumatically operated rubber squeeze rolls.

Safety knock-offs prevent accidents to operators and materials.

Incorporates every device for automatic control of all elements involved in operation.

Positive counter-current flow, with constant uniform pre-determined liquor level in each tub. Made possible by R&L stainless steel flooded suction low head pump and adjustable weirs.

ADVANTAGES

Efficient high speed washing for all types of fabrics.

Uniformity piece to piece and set to set.

Extremely versatile, readily accessible, easy to maintain.

Considerable savings in labor, economy in water consumption and cloth handling.

See This Machine in Operation!
Booths 232 — 243, A. T. M. EXHIBITION, Atlantic City
April 26th — 30th

RIGGS AND LOMBARD INC.

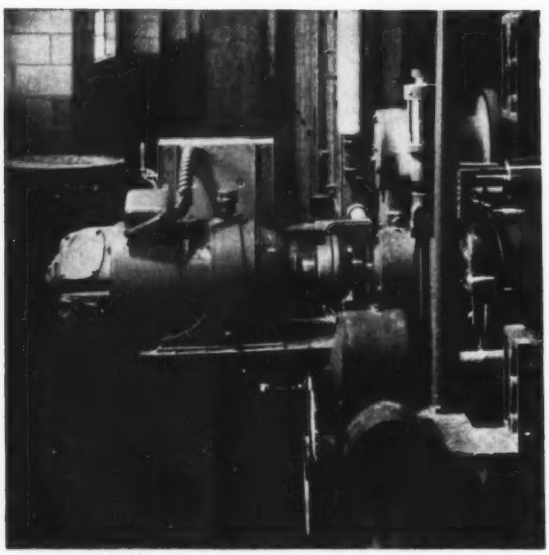
FOOT OF SUFFOLK STREET, LOWELL, MASS.

Agents: Paul A. Merriam Co., 1491 Broad St., Prov., R. I. • Charles H. Dunker, 1236 So. Maple Ave., Los Angeles 15, Calif.
Albert R. Breen, 80 E. Jackson Blvd., Chicago 4, Ill. • F. W. Warrington Co., 611 Johnston Bldg., Charlotte, N. C.
Harold A. Zayotti, Jr., P. O. Box 125, Riverton, N. J. • H. A. Mott Co. Limited, Brantford, Ontario, Canada

ENGINEERING REPORTS:

EASY INSTALLATION, SIMPLE MAINTENANCE are features of this multiple-motor dyeing range at Grace Bleachery. This construction view shows several of the new three-piece G-E gear-motors being positioned. Although G-E drives such as this will operate for a long time with only routine maintenance, motors may be removed without disengaging the gears.

G-E Packaged Range Drive steps up



EASY-TO-MAINTAIN, G-E three-piece gear-motor runs this starching operation on a plisse range. This motor is only one of the many types that G.E. manufactures for the textile industry. Others include: totally-enclosed, ball-bearing loom motors; open, lint-proof motors; vertical motors for twisters and many others to meet your special requirements.

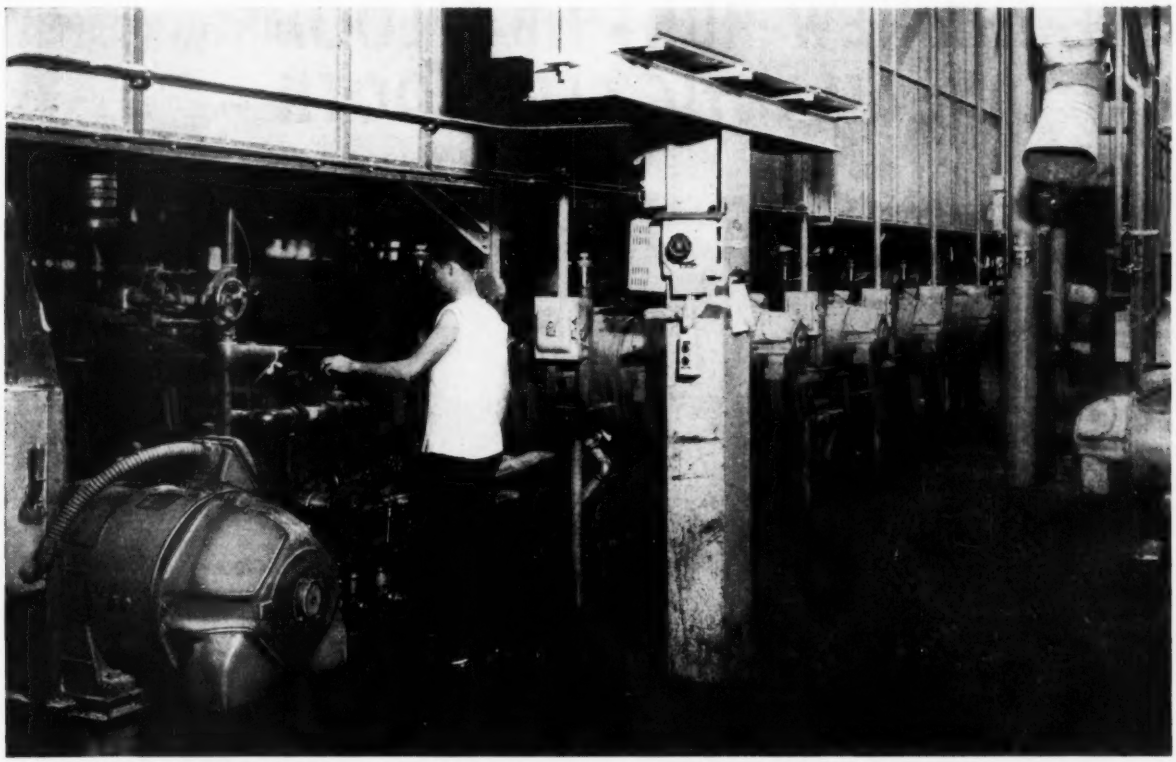
Compact drive gives Springs Cotton Mills' Grace Bleachery high speed finishing

Washing, drying, bleaching, mercerizing, dyeing—whatever your range operation may be—the General Electric packaged range drive can give you higher production per man-hour with lower maintenance costs.

Efficient co-ordination of the drive elements through centralized control is one of the factors making this increased output possible by providing accurate control of cloth tension at all operating speeds. This assures you maximum cloth uniformity with minimum supervision and thus with lower costs.

ONLY THREE STANDARD COMPONENTS make up the G-E adjustable-voltage drive system: the operator's finger-tip control station which can be installed in any convenient location; three-piece range-driving motors and their associated rheostats; and the packaged speed variator unit, containing motor-generator set and exciter, which can be located anywhere to conserve valuable range space.

YOU CAN CUT RANGE COSTS with the easy-to-maintain G-E three-piece gear-motors. They need no special mounting and may be easily removed for servicing without disconnecting the gears or removing the motor base from the foundation. Along with easy maintenance, sturdiness and smooth operation combine to assure you long life for the motor itself.



HIGH FINISHING OUTPUT of Spring Cotton Mills' Grace Bleachery is speeded by three-piece G-E gear-motors. Control system with master rheostat (on center post) provides finger-tip control of entire installation. Packaged power unit was easily located out of the range area. G.E. co-ordinated manufacture and delivery of nearly all drive equipment for this mill.

cloth-finishing output per man-hour

Check the advantages which the G-E packaged range drive can offer you:

SIMPLE TENSION CONTROL, accomplished with inexpensive compensating gates or other co-ordinating equipment

WIDE SPEED RANGES, available up to 8–1 without special equipment

CENTRALIZED CONTROL of range speed from a single location

SMOOTH, STEPLESS ACCELERATION AND DECELERATION with close speed control

EASY MAINTENANCE—motors may be removed for servicing without disengaging drive gears

DYNAMIC BRAKING for sudden stops and regenerative braking for controlled deceleration

YOU CAN PROFIT from other mills' experience. Mail coupon for additional details on G-E range drives or contact your nearest General Electric Apparatus Sales Office.

Mail this coupon for help in solving your range drive problems!

General Electric Co., Section E654-33
Schenectady 5, N. Y.

Please send me without obligation your Bulletin GEA-5010 which gives the latest developments in G-E range drives.

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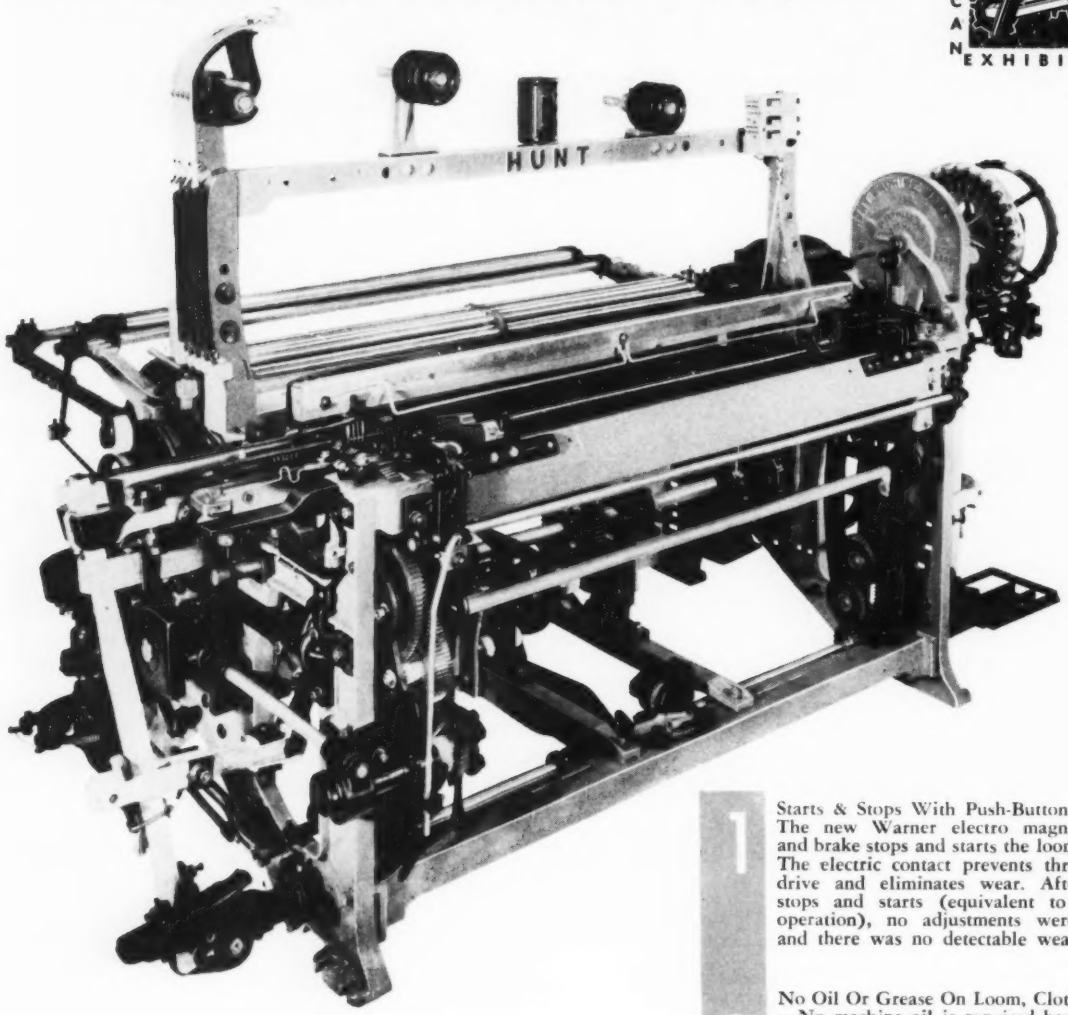
Engineered Electrical Equipment for Textile Mills

GENERAL ELECTRIC

SEE THE NEW HUNT HB-3 LOOM AT OUR ATLANTIC CITY BOOTH

TEXTILE MACHINERY EXHIBITION — ATLANTIC CITY APRIL 26-30 1954 — AMERICAN ASSOCIATION



You've heard about it—now you can see it in operation at the Textile Machinery Exhibition in Atlantic City. See the new Hunt HB-3—completely automatic—stops and starts precisely.

See the new HB-3 Loom in Booths 701-702 at Atlantic City—April 26-30

HUNT LOOM & MACHINE WORKS, INC.
200 ACADEMY ST. • GREENVILLE, S.C.

LOOMS & LOOM PARTS • SPREADERS • MOTOR DRIVES
HYDRAULIC CRANKSHAFT PRESSES • SIZE PUMPS

1 Starts & Stops With Push-Button Control—The new Warner electro magnetic clutch and brake stops and starts the loom precisely. The electric contact prevents thrust on the drive and eliminates wear. After 256,740 stops and starts (equivalent to 50 years' operation), no adjustments were required and there was no detectable wear.

2 No Oil Or Grease On Loom, Cloth Or Floor—No machine oil is required because of oil impregnated bushings and nylon gears against metal gears. Sealed bearings require only periodic greasing. Results are reduced seconds, because of no grease on cloth, in addition to time saving from oiling and greasing loom.

3 Fewer Parts—There are 55 less parts on the HB-3 Loom than on other standard models. This fact, plus the reduced wear from nylon gears against metal gears, reduces replacement parts.

4 Ease And Comfort For Employees—The weaver's physical labor is lowered because of push-button control. The proper humidity pulled through the warp yarn into a floor duct practically eliminates lint and dirt, making the weave room as clean and healthy as the most modern office.

Write, wire, or telephone Hunt today for more details on the new Hunt HB-3 Loom.

IN PROCESS HEATING AND COOLING with PLATECOILS

REPLACE PIPE COILS

save 50%

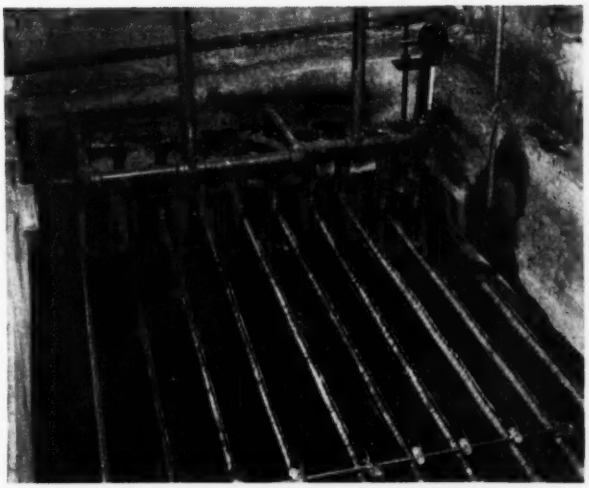
in tank space

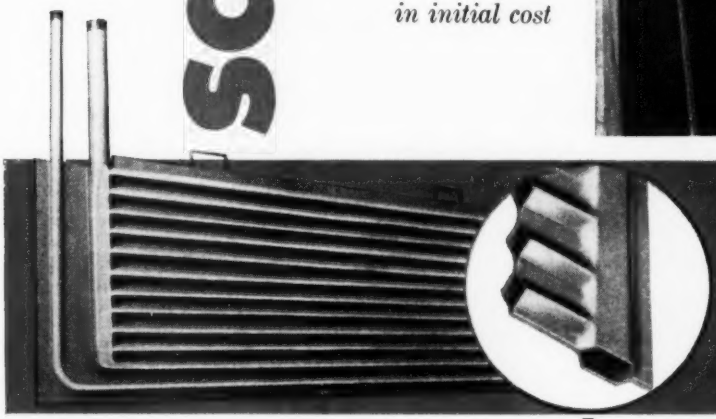
in heating or cooling time

in maintenance labor

in unit weight

in initial cost





The spent dye vats repository [illegible] illustrates a typical use of Platecoils in the Textile Industry. Use of Platecoils in this unit at the Narrow Fabric Mills cut fuel and labor costs.

save 50%

in tank space

Platecoils take only half as much tank space as pipe coils thereby increasing the working capacity of a machine or tank. A Platecoil only 22" x 47" in size gives the same heat transfer as 32 feet of 1½" pipe which requires a space approximately 30" x 60".

save 50%

in heating or cooling time

The unique construction of Platecoil makes its entire surface effective heat transfer area. As a result, a more compact Platecoil unit provides much greater BTU transfer per unit area than can be obtained with pipe coil. It will heat or cool a tank 50% faster to make working hours more productive.

VISIT THE

PLATECOIL

REPLACE PIPE COILS

EXHIBIT—Booth 903-904

in maintenance labor

Platecoils are not only much easier to clean than pipe coils but deposits form less readily on their streamline surfaces. They can be removed and replaced without dumping the tank solution and often without loss of production time.

save 50%

in unit weight

Weighing only about half as much as equivalent pipe coils, Platecoils are easy to handle. They can be transported and installed without the overhead hoists and complicated fixtures needed for pipe coils.

save 50%

in initial cost

The initial cost of Platecoil is often 50% or more below the cost of equivalent pipe coil depending, of course, on the materials used in construction. Additional savings in installation time and labor reduce the cost of the complete installation to a fraction of the cost for pipe coils.

save 50%

Platecoil Division, TRAYTER MANUFACTURING [illegible]

Presents A Show Within A Show

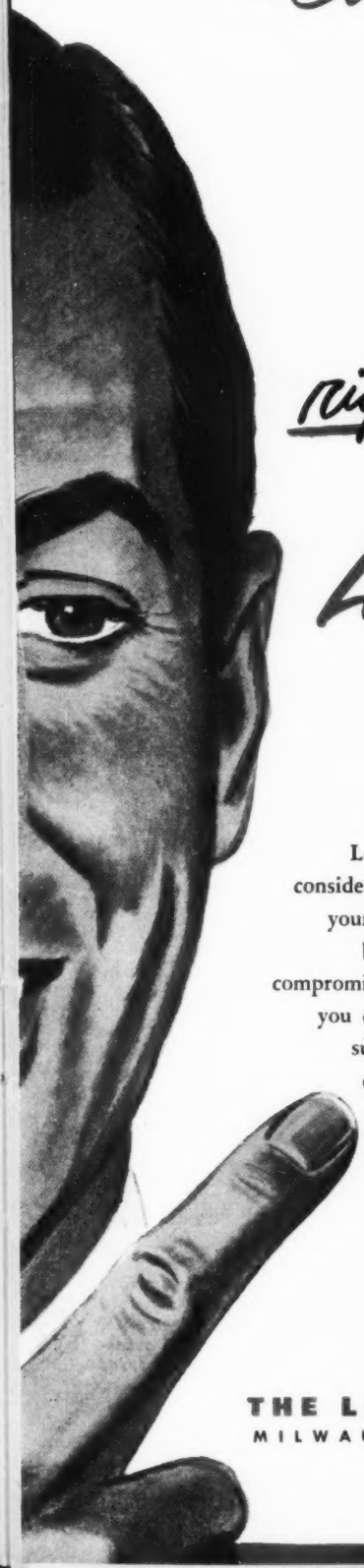
Cocker's exhibit at the American Textile Machinery Exhibition will show the *full line* of High Speed Cotton and Rayon Warp Preparation Room Equipment . . . including the *first showing* of four outstanding *new* machines . . . and featuring the *all new* Cocker Combination Slasher.

Put a big check mark over the Cocker booth and visit it early.

New 21″ Tricot Warper
New 40″ Cotton Warper
New 32″ Rayon Warper
New Cheese Creel
New Combination Slasher
Also Cooking and Storage Kettles

Cocker Machine and Foundry Co., Gastonia, N.C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT



A Complete adjustable speed line

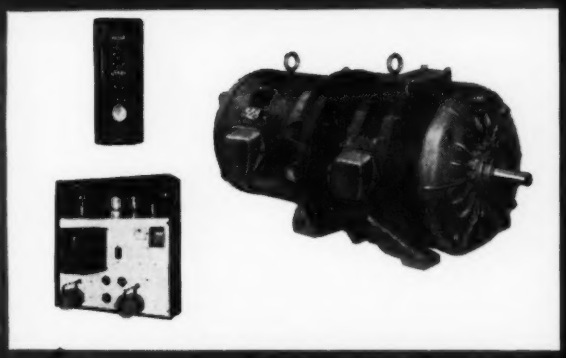
Get the right answer from Louis Allis

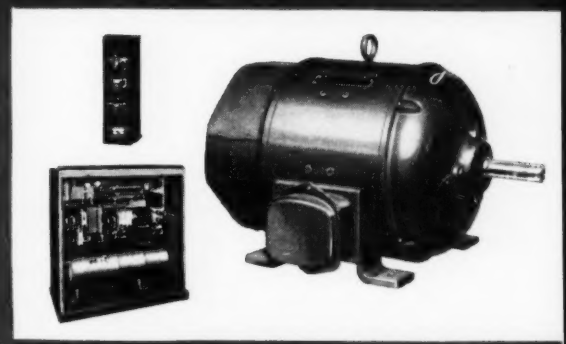
It pays to think first of the Louis Allis Co. whenever you're considering adjustable speed drives for your product or plant. Louis Allis builds all basic types. There's no compromising — from this complete line you can select the unit that's exactly suited to your job conditions and engineered for your application.

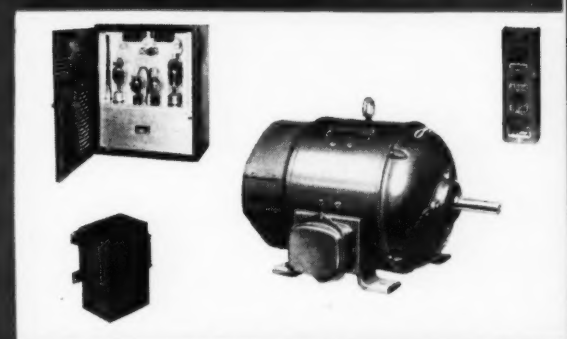
For the simplest — and best — solution to any adjustable speed drive problem, call your nearby Louis Allis Sales Engineer, or write to us.

THE LOUIS ALLIS CO.
MILWAUKEE 7, WISCONSIN

ASD-101







When you need instrument service . . .

Ever have a tire blow out while you're traveling late at night? If it happens near a service station, you're lucky. But if it's on a lonely road far from town, you've got trouble.

When it comes to service on instruments, you don't need to take chances on being lucky. Because when you have Honeywell instruments, you've always got the comfortable feeling that service is close at hand . . . whenever and wherever you want it . . . from the world's biggest instrument service organization.

Over 110 Service Centers

No matter where you may be, there's a Honeywell service man near you. Offices are located in more than 110 cities of the United States and Canada, near every large production center.

When you run into trouble, just telephone or wire the nearest of these offices. You'll get a service specialist promptly . . . often within a few hours. This quick attention to your needs protects your production schedules, and prevents delays that can cause costly stoppages.

Trained Personnel

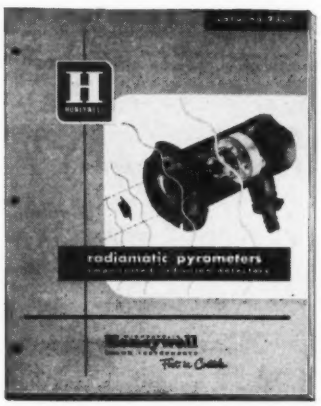
Honeywell service men are thoroughly trained for their important responsibilities. In the Honeywell factories, hand-picked men learn both the theory and practice of instrument maintenance. Then they serve an apprenticeship in the field offices, to gain further first-hand experience. You can be sure that the Honeywell man who calls at your plant is a qualified specialist, well versed in the practical art of keeping good instruments in the best condition.

Periodic Service

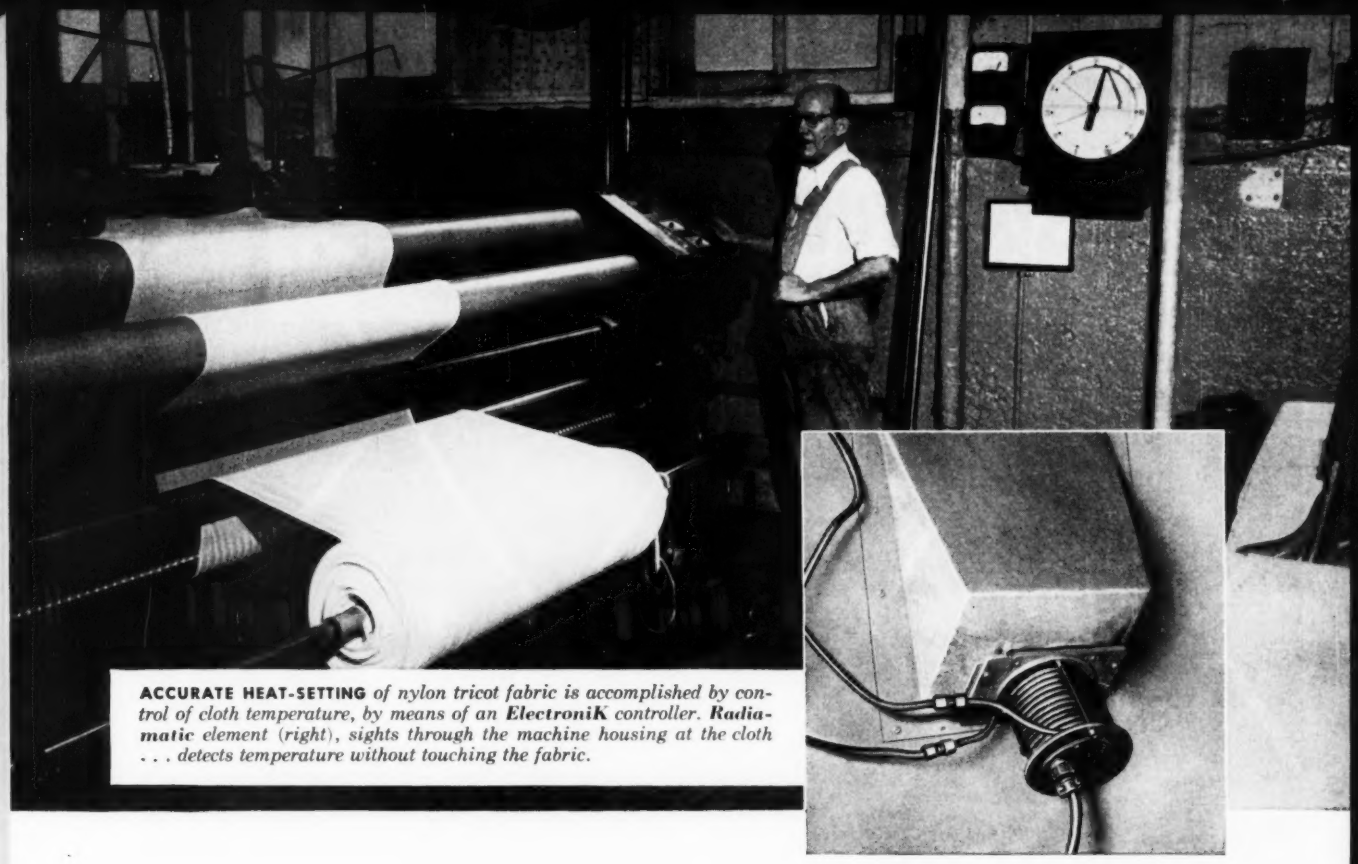
But why wait for emergencies—when you can prevent them with periodic service. Under a simple contract, a Honeywell man will visit your plant at regular intervals to inspect, clean and adjust your instruments and controls. The plan is economical, and can save you hours of production time. Our nearby branch office will be glad to give full details on Honeywell Periodic Service.

Nylon mill doubles output...

Radiamatic Unit



Catalog 9301 lists various types of ***Radiamatic*** *Pyrometers,* ***ElectroniK*** *instruments and accessories for industrial temperature measurement and control.*



ACCURATE HEAT-SETTING *of nylon tricot fabric is accomplished by control of cloth temperature, by means of an* ***ElectroniK*** *controller.* ***Radiamatic*** *element (right), sights through the machine housing at the cloth . . . detects temperature without touching the fabric.*

aids new heat-setting technique

AN ingenious method for combining nylon heat-setting and tentering into a single operation . . . under accurate control by a *Radiamatic* pyrometer . . . has more than doubled production and greatly improved fabric quality, at Julius Kayser & Co., Ltd., Sherbrooke, Quebec.

Both of these important operations are performed on a tenter frame, to which has been added a radiation-heated box that serves as the heat-setting unit. Needless to say, accurate automatic control is essential to the functioning of this system . . . especially to the heat-setting stage. If temperatures are too low, quality will suffer; if too high, fabric will be damaged.

To get the required precision of temperature, Kayser uses a *Radiamatic* element with an *ElectroniK* control system. The *Radiamatic*, a Low Range Unit, sights at the fabric as it leaves the heat-setting unit. It measures *actual* temperature of the cloth . . . instantly detects the slightest change. The *ElectroniK* instrument, with its *Electr-O-Pulse* control relay, records the fabric temperature and regulates heat input to the radiation heaters to maintain constant temperature of the fabric. The control system proportions heat with exceptional sensitivity, by switching power on and off in pulses of controlled length.

Under control of this accurate, sensitive system, temperature stays exactly at specified heat-setting value; and fabric receives a uniformity of treatment never before possible.

Ask your nearby Honeywell sales engineer to discuss how this control can work for you. Call him today . . . he's as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, Wayne and Windrim Avenues, Philadelphia 44, Pa.

● **REFERENCE DATA: Write for Catalog 9301, "*Radiamatic* Pyrometers."**

MINNEAPOLIS **Honeywell**

BROWN INSTRUMENTS

First in Controls

Speed your spinning . . .

. . . with National Travelers!

Get maximum spindle speeds in your mill by specifying NATIONAL RING TRAVELERS. There's a National Ring Traveler for every spinning and twisting requirement — available at a moment's notice from our full stocks in Pawtucket and Charlotte: U. S. Standard (American, Hicks, Wilson, Elliptic) and Wentworth (Double Duty or P.B., Gravity, Gravity Express, Bal-Ellipsoid).
National Ring Traveler Co. and Sterling Division,
Pawtucket, R. I. and Charlotte, N. C.

See us at Booths 31-32

TEXTILE MACHINERY EXHIBITION — ATLANTIC CITY — AMERICAN TEXTILE MACHINERY ASSOCIATION

NATIONAL Sterling RING TRAVELERS

F. L. Chase, Jr., Pres. and Treas. • R. V. Borden, Plant Mgr. • L. E. Taylor, So. Mgr.

NATIONAL RING TRAVELER CO. PAWT. R.I. U.S.A.

OLDEST AND LARGEST MANUFACTURER OF RING SPINNING AND TWISTING TRAVELERS IN THE UNITED STATES

Booth Originators of STRIP-O-MATIC*

STRIP-O-MATIC Card Clothing NEWS AND VIEWS

STRIP-O-MATIC CARD CLOTHING

CAN YOU AFFORD *NOT* TO MODERNIZE?

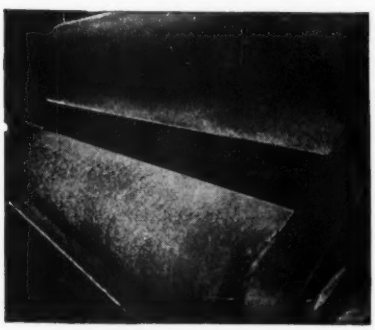
Today's rising production costs demand new and improved methods that will enable the textile manufacturer to maintain a profitable position not only in this Country's textile industry but also against the competition of foreign goods. Each day the question becomes less a matter of can you afford to adopt improved carding methods, than can you afford not to take advantage of the most modern and efficient method available to the industry, STRIP-O-MATIC. Prominent mill owners have learned they cannot afford to overlook it.

Consider these advantages of STRIP-O-MATIC . . . . then ask yourself if you can afford not to modernize your carding operations.

STRIP-O-MATIC reduces stripping to a minimum. Because fibres do not fill up STRIP-O-MATIC, runs between stripping can be increased anywhere from 2 weeks to 9 months on fine work and up to 6 months and more on carpet work. STRIP-O-MATIC turns normal *down time* into extra *production time* . . . at substantial savings in time, money and labor.

STRIP-O-MATIC requires no special equipment or specially trained workers—can be run by men accustomed to your regular Fillet Clothing.

Let us help you modernize your Card Clothing operations with STRIP-O-MATIC. In addition, we manufacture a complete line of conventional clothing for every textile fibre. Call on us for any carding problems—there's no obligation, of course.



Sincerely,

E. Allen Snape Jr

President

BENJAMIN BOOTH COMPANY

"We're looking forward to seeing you at Atlantic City . . . Booth #347—348"

MANUFACTURERS OF QUALITY CARD CLOTHING FOR OVER 60 YEARS

*Patented

BENJAMIN BOOTH COMPANY, ALLEGHENY & JANNEY STS., PHILA., PA. Booth

HIGH SPEED MOVIES SHOW CARDING ACTION AT BENJAMIN BOOTH COMPANY EXHIBIT IN ATLANTIC CITY

Special high speed movies that give viewers an easy to follow picture of what happens in a carding operation will highlight the Benjamin Booth Company exhibit at the American Textile Machinery Exhibition, Atlantic City, N. J.

Cut from hundreds of feet of film made during Booth Company research and at actual mill installations, this short movie shows the results of tests made on many types of stocks and blends. Visitors to the Booth Company exhibit will find the film both interesting and valuable in answering questions they have had on the subject of carding.

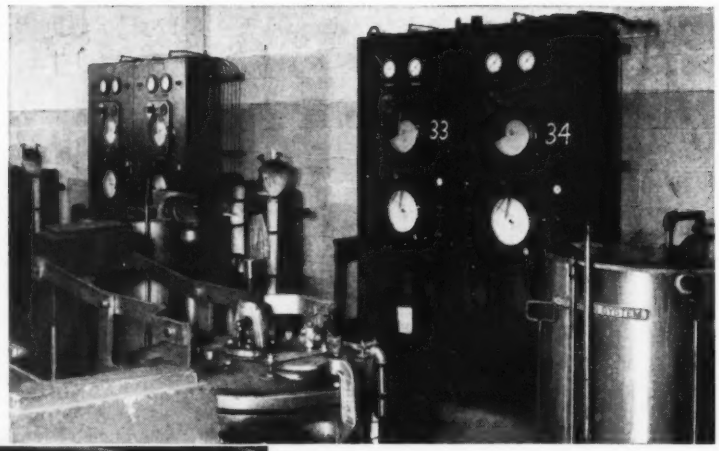
The exhibit will also feature the complete range of Booth developments including the famous STRIP-O-MATIC in both straight and bent-tooth designs. The new bent-tooth STRIP-O-MATIC will be of particular interest to those visitors who prefer a knee-type clothing.

Visitors will also have the opportunity to see bent-tooth STRIP-O-MATIC made. A card clothing machine on display will be operating at low speed to permit detailed observation of the manufacturing process.

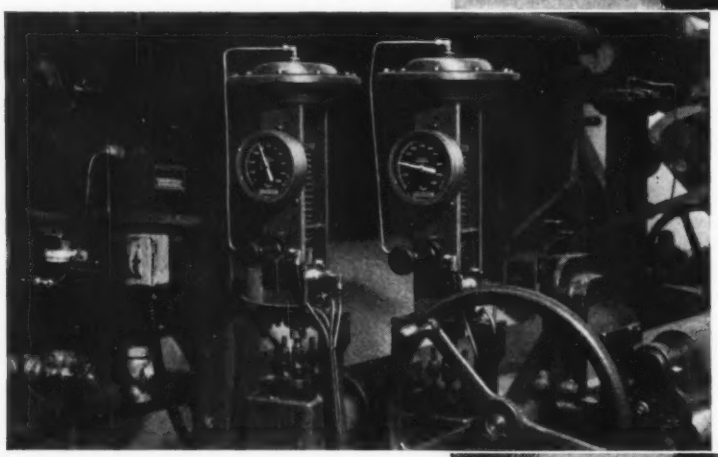
Plan to visit the Booth Company exhibit at the Atlantic City Exhibition. It will be open April 26–30. You'll learn many ways to add new economy . . . and productivity to your carding operation. In addition to STRIP-O-MATIC you'll find a complete line of conventional clothing for all types of fibers. You'll see proof of over 60 years of continuous contribution to the Textile Industry.

5 WAYS TO

1



Taylor FULFLEX* Time Schedule Controllers insure completely uniform dyeing, extremely close matching of shades and save money on steam and labor too! Here they are automatically controlling package dye machines in a large New England worsted mill. All the operator does is press the start button. There are no cams to cut for different cycles, and any part of the cycle may be repeated by simply resetting the dial and pushing the start button again.

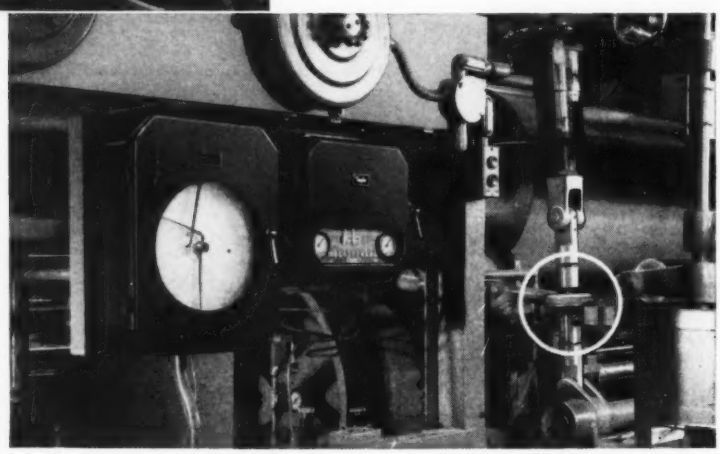


2

No soft spots with Taylor's Squeeze Roll Pressure Control, in use here on a high speed Rayon Slasher in a well known Southern Mill. Out-of-round roll conditions are quickly detected, and uniform penetration of size is insured, because it measures and controls actual pounds of pressure applied directly to the roll —unaffected by friction or leaking air.

3

Uniform dyeing is easy with this Taylor Dye Padder Control System, because you can adjust Squeeze Roll Pressure the way you want it, and you're sure of dye liquor level. A FULSCOPE* Liquid Level Controller maintains the level of the dye in the dye box, assuring uniform immersion of the cloth. A Taylor Volumetric Load Recorder accurately shows pressure exerted across squeeze rolls.



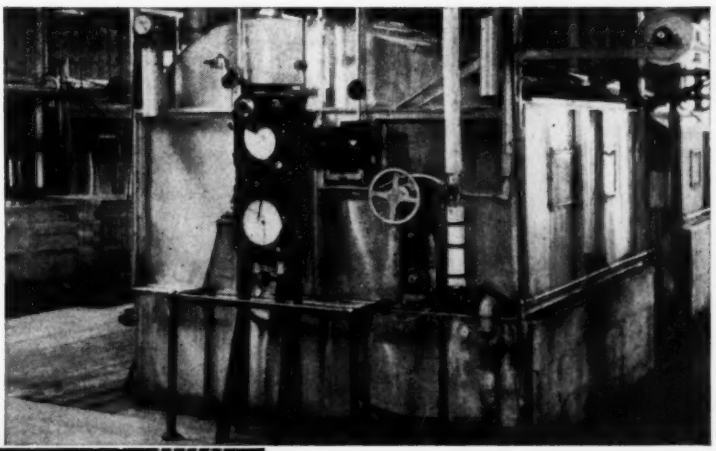
*Trade-Mark

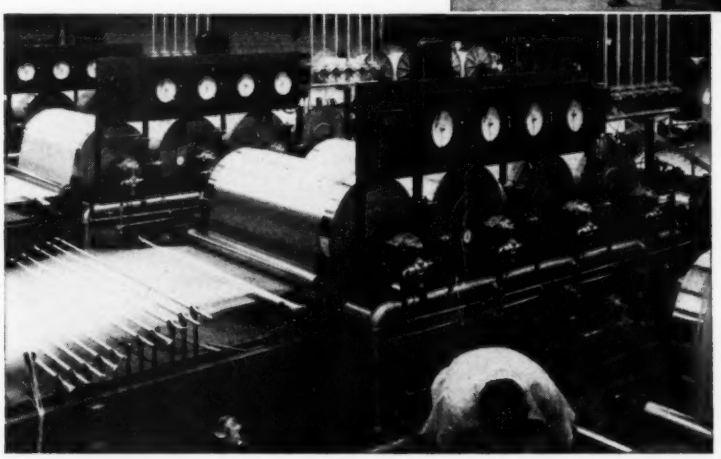
SAVE MONEY

...with Taylor Automatic Controls!

4

A Knitting Company in the North East is very complimentary about the results obtained with this Taylor control system on their dye tubs. In fact they say they wouldn't want to dye without it. Main advantages are that it assures uniform dyeing conditions, preserves the quality of the dyed fabric, eliminates costly errors of manual operation and cuts operating costs.





5

Taylor keeps these modern High Speed Slashers under accurate control, regardless of operating temperature requirements. Control of condensate gives closest possible relationship to cylinder surface temperature to produce a properly slashed warp. Taylor's system of quick, automatic heat-up removes air and water from cylinders promptly.

At the Textile Show you will be struck by the prevalence of the name Taylor on equipment being exhibited by a wide variety of manufacturers. This practically universal acceptance of Taylor control systems is due to our wide knowledge of the industry's problems, and the skill of our engineers in overcoming them with practical instrumentation. Famed for their ruggedness, simplicity of operation, ease of maintenance and long life, Taylor controls can save you money in many ways. Come in and visit us at the Show—or write Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada.

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION ATLANTIC CITY APRIL 26-30 1954

Visit our Exhibit

Booths 551, 552, 553

Taylor Instruments
MEAN ACCURACY FIRST

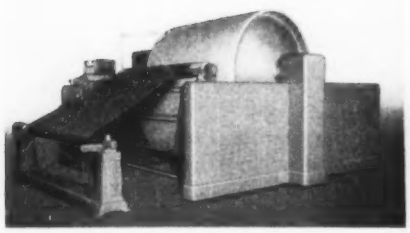
Know what you're doing when you nap *with the* NEW GESSNER NAPPER

For the first time, Gessner can give you maximum napping effect on any fabric without usual waste or flocking out.

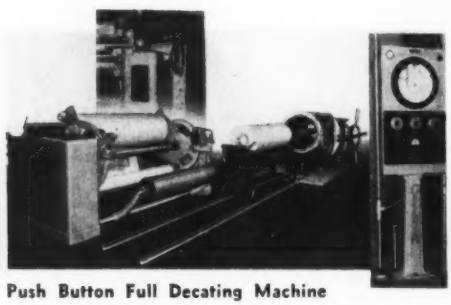
Four unique features of this new Gessner Napper include precise napper-roll torque control, self-correcting speed controls, higher positive cloth inspeed, and infinitely variable cloth tension control. Application of high maximum napping energy gives you as much as four times the production on certain fabrics.

Extreme accuracy of the controls and a simple, positive means of making settings, which are automatically maintained, assure greater efficiency. In addition, a wider range of napping effects is possible because this new drive controls not only the speed but also the power exerted on the worker rolls. Cloth tensions are controlled by the automatic slack take-up of the torque-activated take-away feed roll.

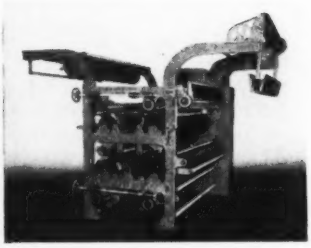
Other newly-introduced Gessner equipment of interest to cloth finishers includes a 60" Triple Cylinder Gig, a Center Winder as well as the machines shown below.



Versamatic Decating Machine in 30", 40", and 60" cylinder widths



Push Button Full Decating Machine



Steam Brush

DAVID GESSNER COMPANY

WORCESTER, MASS.

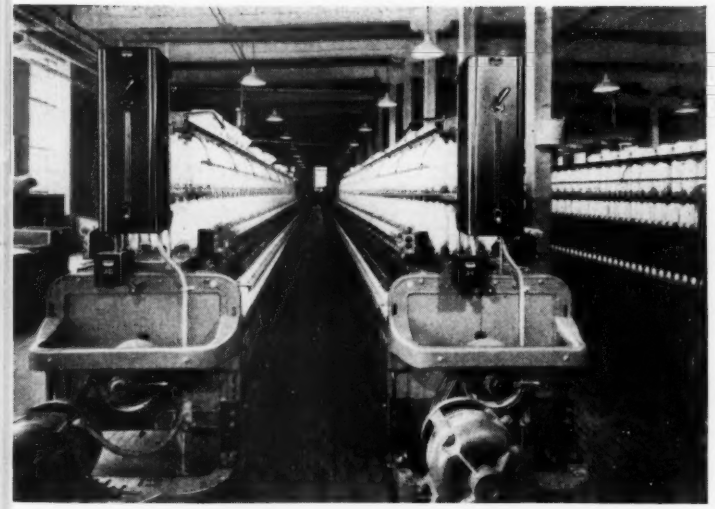
Canadian Representative: W. J. Westaway, Montreal, Quebec; Hamilton, Ont.

Gessner Improved Cloth Finishing Machines maintain a standard of performance to meet the exact requirements of your cloth finishing.

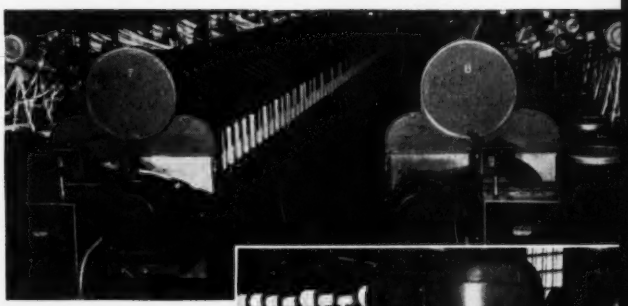
For more information, write direct or use Reader Service post card.

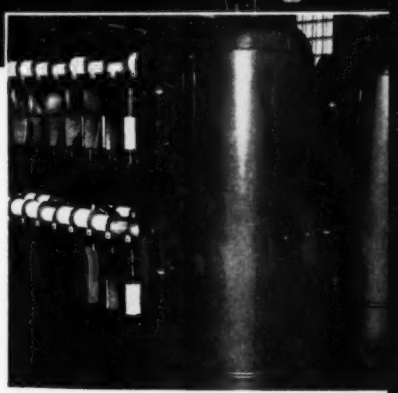
CUTLER-HAMMER

MOTOR CONTROL FOR THE TEXTILE INDUSTRY

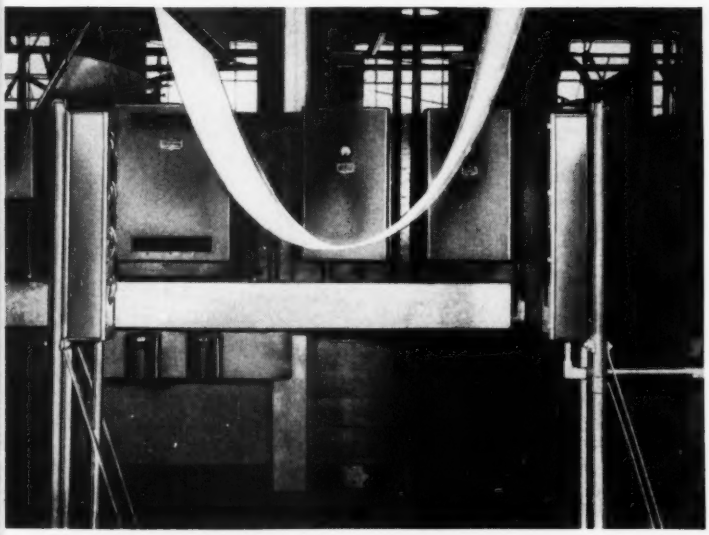


at **STATESVILLE.** Cutler-Hammer Combination Starters and Shipper Rod Switches on spinning frames in STATESVILLE DIVISION, The Seminole Mills, Statesville, N. C.





for **WAUMBEC**
at Manchester, N. H. Cutler-Hammer Pushbutton Manual Starters on uptwisters and Primary Resistor Type Magnetic Starters on roving frames. Cutler-Hammer control also used on looms and spinning frames in this great mill.



at **MOORESVILLE.** Cutler-Hammer Electronic Dancer Roll Regulator and Range Drive Controller on slack drying range at Mooresville Mills, Mooresville, N. C.

NEW CUTLER-HAMMER LOOM SWITCH

with NEMA 1A Lint-Tight Gasketed Enclosure

Pushbutton operation—an achievement for this type of starter. Stop button can be padlocked.

Stronger, smaller, drawn steel case. Unique welded-steel mounting pedestal available to create a *complete* assembly with unparalleled resistance to mechanical shock.

New NEMA 1A lint-tight gasketed enclosure prevents entrance of lint and dust.

Service proven, positive make, quick break operating mechanism built on *steel* framework.

"Out in the open" contacts for quicker inspection and easy renewal *on the job*. Most dependable overload protection—famous Cutler-Hammer eutectic element type—prevents unnecessary shutdowns without sacrifice of *positive* motor protection.

Vibration resistant. Mechanism "floats" in truly effective *live rubber* mounting bushings.

Too important to be left to chance

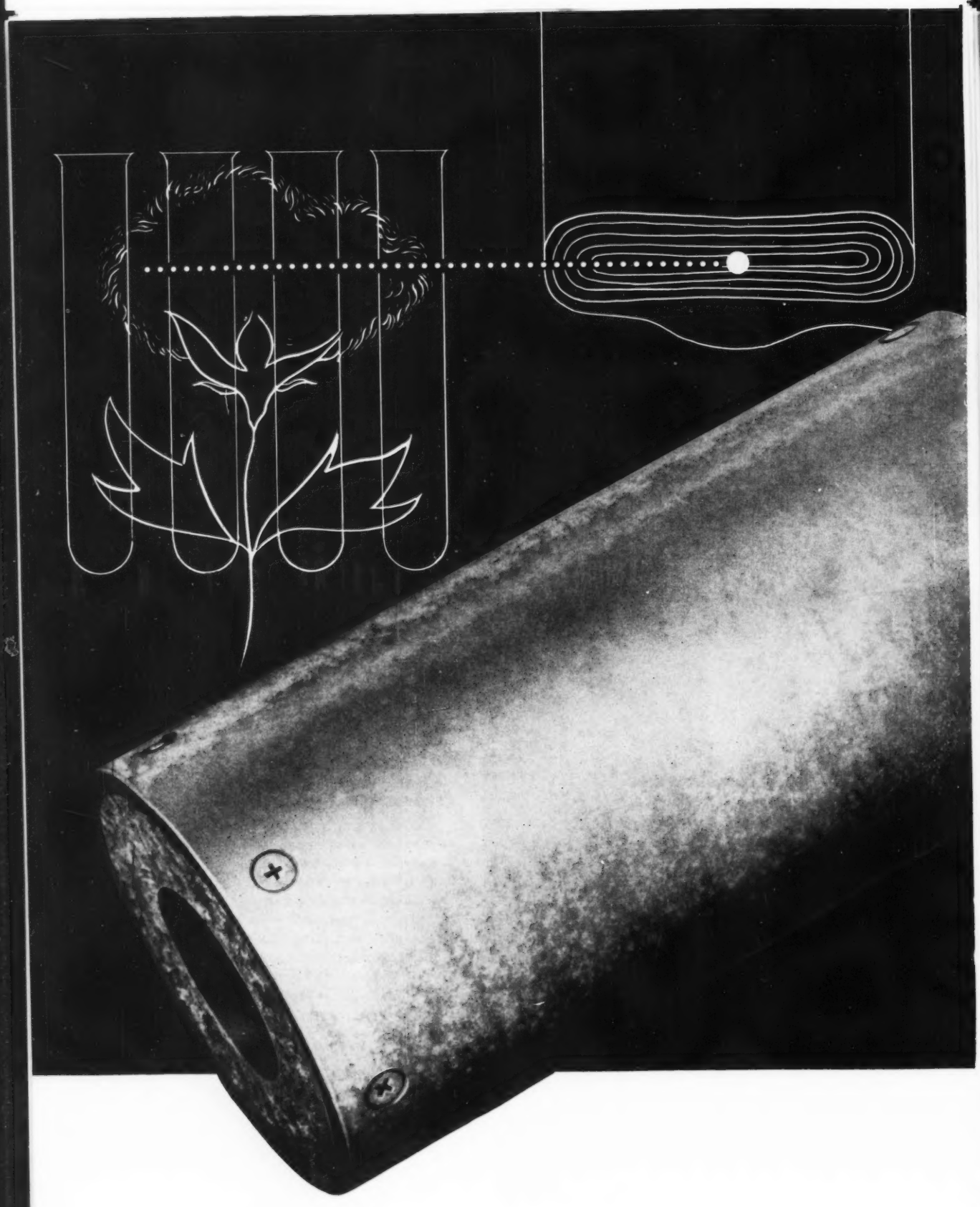
Men who *know* textile production costs are careful buyers of motor control equipment. They know a single work stoppage caused by faulty control can easily cost more than the entire purchase price of the control. In consequence, they do two things. First, they compare *all* makes of motor control to determine which is most dependable. Second, they specify this make by *name* on every purchase order.

Cutler-Hammer Motor Control is the natural choice of men who know dependability in motor control is too important to be left to chance. They quickly find Cutler-Hammer dependability is not a mere competitive claim but a *fact* that can stand out clearly in a mill's production records to reflect favorably on their own ability and good judgment. They also find that Cutler-Hammer dependability is not an occasional happenstance... that it is the earned advantage of the longest and most intensive specialization in motor control engineering... that it can safeguard *every* control need from the simplest starter to the most complex electronic equipment.

You too will find it pays to insist on Cutler-Hammer Motor Control and refuse all substitutes. An adequate network of Authorized Cutler-Hammer Distributors throughout the textile manufacturing areas insures prompt attention and supply. CUTLER-HAMMER, Inc., 1457 St. Paul Avenue, Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H

VISIT OUR BOOTHS 427-428 AT ATLANTIC CITY EXHIBITION



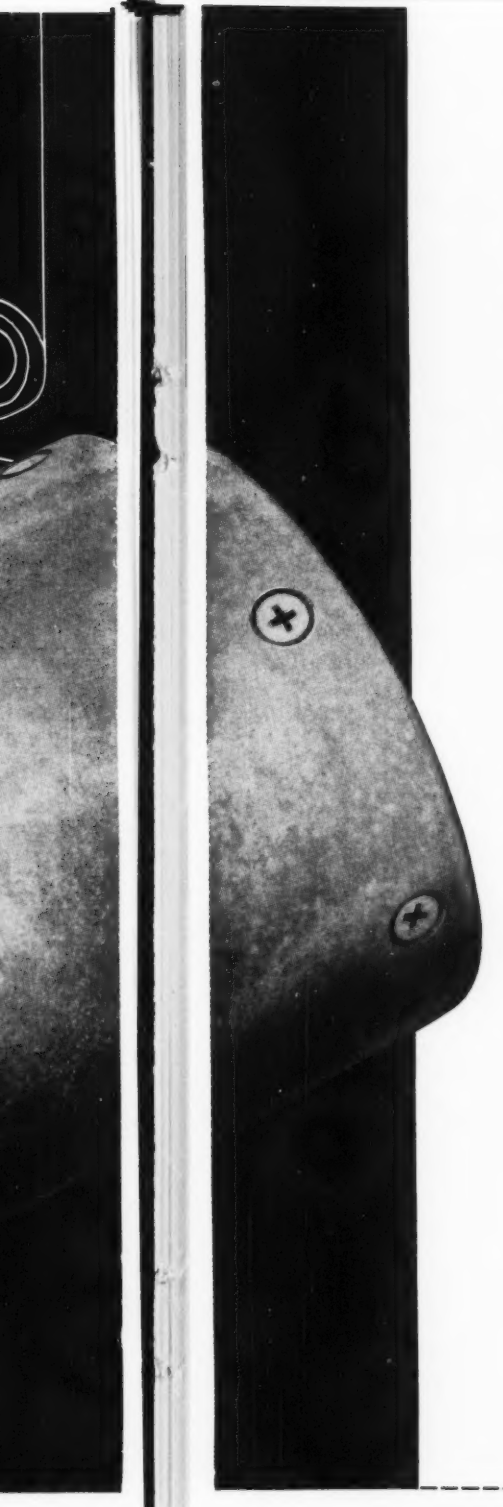
vents entrance of lint and dust.

Service proven, positive

Mechanism "floats" in truly effective *live rubber* mounting bushings.

C-H

CITY EXHIBITION



Here's what micarta® LAMINATED PLASTICS is doing to boost textile production

A leading textile mill wanted lighter, tougher lap rolls which would stay on the job longer. MICARTA® was the answer. Now the MICARTA lap rolls not only last months longer than the ordinary wooden rolls but their lighter weight permits up to three additional pounds of cotton to be wound on each roll. In addition, the MICARTA surface permits instant pick-up and wrinkle-free winding without the nuisance and expense of removing clinging bits of lap.

Here's what MICARTA can do for you

Light, tough, smooth-wearing MICARTA will pay off for you on products like spinning buckets, shuttles, bobbins, pirns, picker sticks and gears. On other textile applications, too, you can take advantage of its ability to withstand and "cushion" heavy vibration and shock . . . to reduce nerve-wracking noise. MICARTA means economy, less maintenance, more production.

Remember that Westinghouse-developed MICARTA is a thoroughly proved basic material. For the complete story on MICARTA call your nearest Westinghouse office or just fill out the coupon below. J-06542

YOU CAN BE SURE...IF IT'S Westinghouse

Westinghouse Electric Corporation • MICARTA Division, Trafford, Pa. • Attention: L. A. Pedley

micarta® is basic!

Sir: (Please check one)

☐ Please have your representative call

☐ Please send me the complete facts on MICARTA

Name_____ Company_____

Address_____

City_____ Zone____ State_____

Custom-made SHUTTLES

Shown below are Watson-Williams shuttles for Draper Looms

L MODEL
18½" long
for 8¾" quill

E MODEL
16½" long
for 8¾" quill

E MODEL
15¾" long
for 8" quill

X2 MODEL
16½" long
for 8¾" quill

XD MODEL
15¾" long
for 7⅜" quill

The Shuttle People

Watson-Williams specializes in custom-made shuttles, manufactured to your exact requirements, both for C & K and Draper Looms. Among the scores of shuttle improvements by the Shuttle People, one of the most important to your weaving today is the Blanchard Quarter Turn Tension Eye Locked Adjusting Screw.

Your visit will be welcomed at our Booths 582, 583, 584 and 584AA American Textile Machinery Exhibition, Atlantic City, April 26 - 30.

Southern Representatives:

Watson & Desmond, Box 1954, Charlotte, N. C.

Arthur J. Bahan, P. O. Drawer 779, Greenville, S. C.

John Wyatt, P. O. Box 701, Greensboro, N. C.

Northern Representatives:

Guy C. Burbank, 32 Beaconsfield Rd., Worcester 2, Mass.

Sutton M. Ebert, P. O. Box 7144, Elkins Park, Philadelphia, Pa.

WATSON-WILLIAMS MFG. CO.
MILLBURY, MASSACHUSETTS

For more information, write direct or use Reader Service post card.

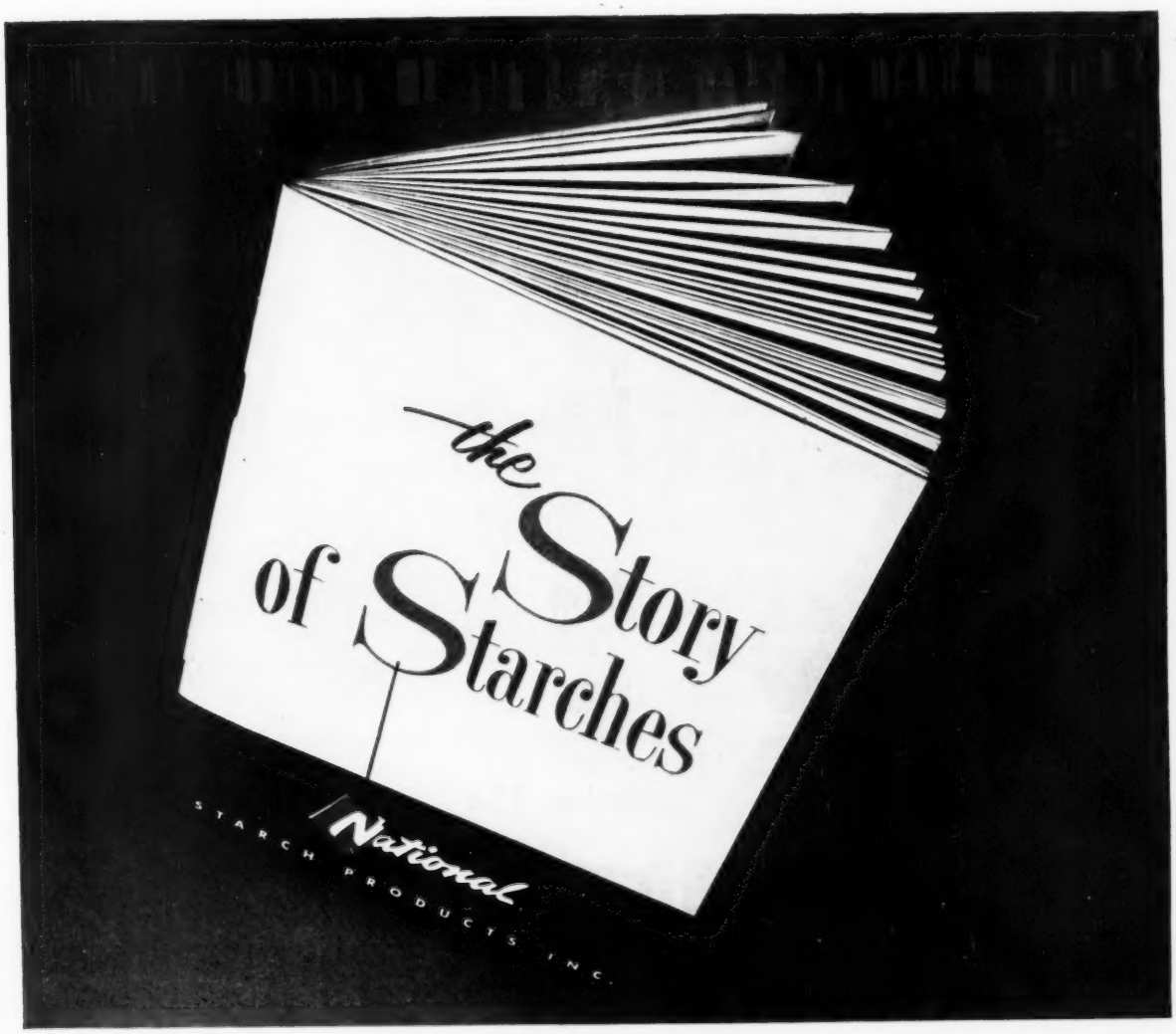
WE HAD LONG BEEN FASCINATED BY THE IDEA

. . . of putting the amazing story of starches between the covers of a single book. We realized that such a book would be a tremendous undertaking. The endless variety of starches, the ways they are produced, the creation of new specialty starches, the miracle of 'man-made' starch derivatives, the handling of starches—even these few subjects, covered in full, would make a large volume.

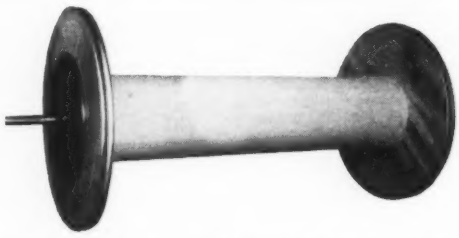
A steady flow of requests for information about starches finally prompted us to take a first step with a 56 page, semi-technical booklet. We have painted in broad strokes a panoramic picture of starches—their properties, production, application and handling.

We have included information of value to chemists and other technically trained people, in a way that will also be interesting to non-technical readers. Chemists, students, plant personnel, commercial management and all others who are interested in starches will find in this booklet something of value.

Copies of "The Story of Starches" may be obtained, without obligation, at National Starch's booth at the American Textile Machinery Exhibition.

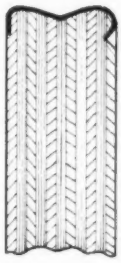


New HUBBARD BEAMS



WOODEN SECTION BEAM

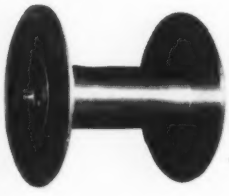
13 ply hardwood—10 cycle bond
Well balanced—Lightweight



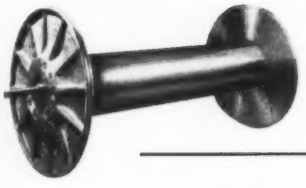
New Type
STEEL RIM

"Will not come off"

LIGHT WEIGHT PLYWOOD — **Loom beam flanges Steel Friction Drums**



HEAVY DUTY BALANCED — **Aluminum Tricot Beams**



LIGHTWEIGHT RUGGED BALANCED — **Aluminum Section Beams**

Visit us at Booth No. 554— Textile Machinery Show, Atlantic City, N. J., April 26—30.

HUBBARD SPOOL CO.

GARRETT, INDIANA

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TEXTILE MACHINERY EXHIBITION
AMERICAN ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954

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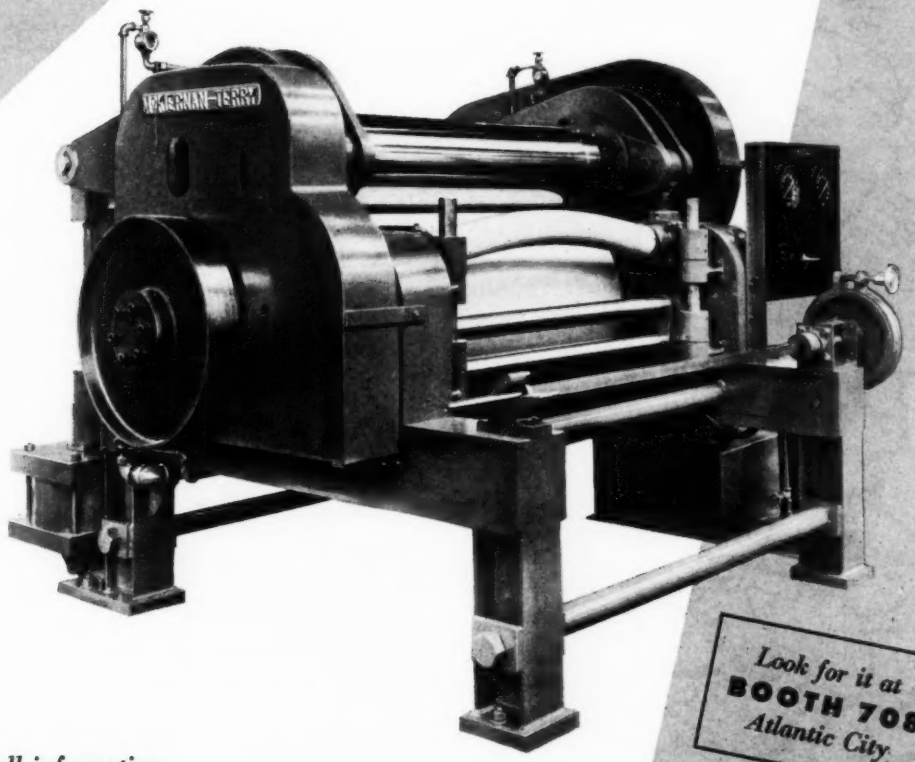
Multi-Purpose

CALENDER

For Resin Finishes

The Calender that can be used for Friction, Schreiner and Embossing Services in a SINGLE Machine



Look for it at **BOOTH 708** *Atlantic City*

Write for full information

McKIERNAN-TERRY CORPORATION • *Harrison, New Jersey*

EVERYBODY'S TALKING ABOUT...

PENFORD GUMS

(Starch Hydroxyethylethers)
(U. S. Patent Numbers 2,516,632; 2,516,633; 2,516,634)

FOR THE SOLUTION OF DIFFICULT SIZING PROBLEMS

PENFORD GUMS 220 and 230 for sizing **COMBED COTTON YARNS** eliminate hard size, provide maximum weaving protection through a stable controlled product viscosity and produce a gray goods having the characteristic appearance and hand demanded for quality combed cotton fabrics.

PENFORD GUMS 230, 240 and 245 for sizing **SPUN VISCOSE, ACETATE-VISCOSE AND OTHER BLENDS** virtually eliminate hard size and minimize set mark seconds, two of the major problems in the manufacture of spun rayons. PENFORD GUM'S tough but elastic film provides maximum weaving protection in the desirable relative humidity range of 60%-70% without the addition of special adjuncts. Finishing of fabrics woven from warps sized with PENFORD GUMS is greatly facilitated through the low enzyme requirement for complete removal from heavy fabrics and ease of removal by soap scouring without benefit of enzymes on some of the lighter fabrics.

PENFORD GUM 260 with supplemental adjuncts for the sizing of **HYDROPHOBIC STAPLE FIBERS** i.e., **NYLON, ORLON, DACRON, DYNEL, AND ACRILAN**—produces efficient weaving, well sized warps. Many mills have reported PENFORD GUM 260 to be the only material with which they have been able to successfully size warps composed of these fibers.

PENFORD GUMS 250, 260 and 270 are used for the sizing of **SINGLES WORSTED YARNS** where maximum weaving protection to reduce clinging in the shedding motion and skinning of the yarn are requisites for producing quality worsted fabrics. These PENFORD GUMS provide optimum viscosity-concentration relationships for excellent fiber lay with sufficient solids applied to the yarn to keep the normally protruding fibers bonded to the body of the yarn. Even in high concentrations PENFORD GUM'S non-congealing property at low size box temperatures virtually eliminates the costly hard size spots and roll marks so common to many of the worsted sizings.

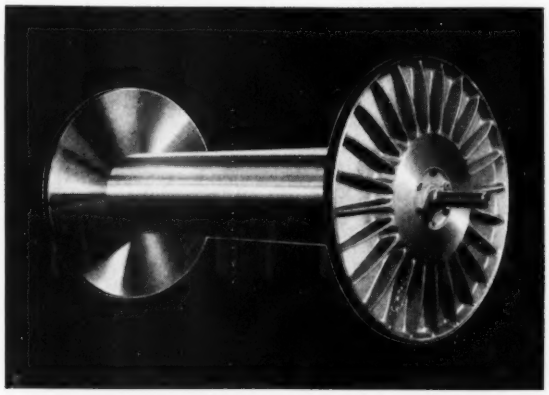
PENICK & FORD, LTD., INCORPORATED

420 LEXINGTON AVENUE — NEW YORK 17, N. Y.
806 BONA ALLEN BUILDING — ATLANTA, GEORGIA
CEDAR RAPIDS, IOWA

We cordially invite you to visit us at Booth #590

How much stress, strain, pull and squeeze should a good nylon section beam withstand?

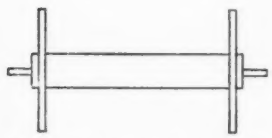
When a section beam is filled with yarn, especially nylon yarn, it stretches in length, is squeezed in diameter, and the heads bulge out. In some instances, the pressure exerted on a fully loaded beam head reaches over 34 tons, crushing stress may go as high as 23,000 P.S.I., and the distance between the heads may grow by as much as one-eighth of an inch.



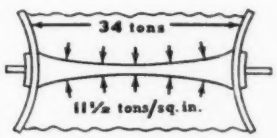
This Hayes Aluminum Nylon Beam withstood a load of 262,000 pounds in a test made by the Engineering Department of Swarthmore College. It is available in 30" and 32" head diameters and is adaptable for use with all current makes of warpers.

The purpose of beam design is to keep distortion caused by these pressures to a minimum, thus preventing yarn breakage. At present, few, if any, engineering and production men in textile plants have adequate information on how big a load of yarn a beam will take while still maintaining an adequate safety factor at the critical stress points. Many beams are purchased and installed with a guess and a prayer that they will hold up under operating conditions.

As textile manufacturing plants make the transition from cotton and wool yarn to nylon and acetate rayon, the importance of good information increases. For, while these yarns do offer the opportunity for better weaves, and better selvages, they are also increasing the stress and strain on the section beam.



When a perfectly harmless warp beam is filled with nylon yarn



It gets stretched squeezed and bulged

Hayes Industries, Inc. of Jackson, Michigan have been conducting strain-gauge tests for their light-metal beams for six years. All this beam-stress data is now being made available to industry men. Furthermore, Hayes salesmen are available to help explain the data to interested engineers and production foremen. They can help you decide the exact beams required for your operation — to give you the best trouble-free production at the lowest cost.

HAYES INDUSTRIES, INC.,
Jackson, Michigan

Dear Sir:

☐ Please send me all available beam-stress data you have.

☐ I would appreciate having a salesman call to go over the data with me.

Name .....

Title .....

Company .....

Address .....

City ..... State .....

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION

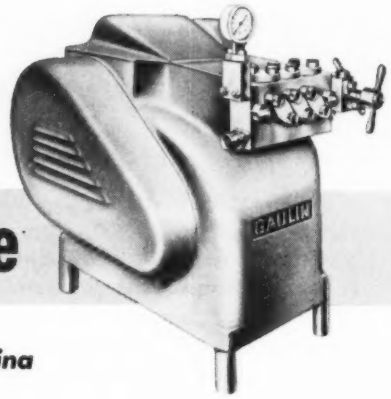
See us at Booths 361 & 361AA.

HAYES INDUSTRIES, INC.
JACKSON, MICHIGAN

THE WORLD'S LARGEST PRODUCER OF LIGHT METAL BEAMS

Southern Representative: R.E.L. Holt, Jr. & Assoc., Greensboro, N. C.
Eastern Representative: J. Paul Laird, Philadelphia, Pa.
New England Representative: J. S. Fallow & Co., New Bedford, Mass.
Canadian Representative: J. S. Fallow & Co., Montreal

The Truth about Gaulin Homogenized Size



As Revealed by 33 North and South Carolina Mills in an STA Questionnaire

We've been telling you how a Gaulin Homogenizer can help you make a *better yarn* at *lower cost* for some years now. We've repeated what hundreds of operators have reported to us. But don't take our word for it alone. Here are the facts — the personal experiences of 33 Mills as revealed in an STA questionnaire. Draw your own conclusions.

Q. *Is your entire production on homogenized size or partly on homogenized size?*

A. 90% of mills with homogenizers have their entire production on homogenized size.

Q. *What type starch is used?*

A. 78.7% of mills reported used pearl starch
7.1% used potato starch
7.1% used thin boiling and pearl
7.1% used thin boiling

Q. *Do you notice an improvement in the uniformity of added size on homogenized warp?*

A. 86.4% report an improvement
13.6% report no change

Q. *Is there a decrease in hard size through the use of homogenizers?*

A. 78.1% report decrease of hard size
21.9% report no change

Q. *Is there any noticeable difference in size in the yarn with homogenized size?*

A. 56.8% report improvement in penetration
43.2% noticed no difference

Q. *Is there improvement in the quality of the warp yarn?*

A. 50% indicated improvement
16.6% very little improvement
33.4% no change

Q. *How long do you store your homogenized size before its usefulness is gone?*

A. 8.3% — 8 hrs.
25% — 16 hrs.
41.6% — 48 hrs.
8.3% varies
16.8% will not hold size
One mill reports that they have checked and held size 56 hrs. and still were able to use the size.

Q. *Is the viscosity of homogenized size more uniform than regular size cooked in the conventional manner?*

A. 65% report more uniformity
36% report no change

Q. *Do you consider your homogenizer a worthwhile investment?*

A. All mills report that they consider it a worthwhile investment.

Q. *How long do you consider it takes to pay for this machine?*

A. 23.1% agree to 6 months
23.1% agree to 12 months
38.4% agree to 18 months
7.7% agree to 24 months
7.7% agree to 36 months

Q. *Are the savings in starch only or are there other savings?*

A. All mills agree that starch is the basis for the largest amount of savings. Other savings are listed as preparation time, 2nds due to hard size, steam due to short cooking cycle, week-end dunking of size.

For more information on Gaulin guaranteed performance, write today.

SYNTHETICS — WORSTEDS

Mills are now preparing more uniform sizes for Synthetics and Worsteds, too, with a Gaulin Homogenizer. Sizes are made finer, faster and at substantially lower costs according to field reports.

Gaulin TRADE MARK

Manton-Gaulin
MANUFACTURING COMPANY, INC.
72 GARDEN ST., EVERETT 49, MASS.
World's Largest Manufacturer of Homogenizers, Triplex Stainless-Steel High Pressure Pumps, and Colloid Mills

The Simplest, Most Compact Downdraft Dryer Ever Built!

SARGENT'S SINGLE APRON DRYER

ANY FIBRE • ANY BLEND

LEADER IN ITS FIELD FOR . . .

PHENOMENAL PRODUCTION — per sq. ft. of conveyor drying area . . . continuous, automatic, trouble-free, economical operation — year in, year out . . . takes amazingly small floor space.

SIMPLICITY OF DESIGN AND OPERATION — easy to assemble . . . curved top provides continuous air flow (no corners to "pocket" air currents) . . . adds to compact, streamlined appearance . . . high velocity fans of latest design directly connected to standard-frame ball-bearing motors . . . so placed there is continuous cool-air-flow around them . . . vibration-free . . . heavily insulated, rugged housing . . . NO HEAT LOSS.

ACCESSIBILITY — quickly, easily cleaned . . . least down-time between lots . . . inspection panels conveniently placed, easily removed for inspection of work in process.

LOW STEAM CONSUMPTION — ingenious arrangement of coils, screen-protected . . . thermostatic controls . . . all add up to minimum operating cost. Designed for either low or high pressure steam.

WONDERFULLY QUIET OPERATION — s-m-o-o-t-h conveyor to carry fibres at all speeds . . . built of heavy-gauge steel sectional flights . . . variable speed, covered chain drives . . . Fisher-type rotary feed.

Let us show you . . .
how this Dryer will cut your costs. Please write your nearest representative, or write us direct, for complete details.

C. G. SARGENT'S SONS CORPORATION

Graniteville, Massachusetts

REPRESENTATIVES: F. E. WASSON, 519 Murdock Rd., Philadelphia 19, Pa.
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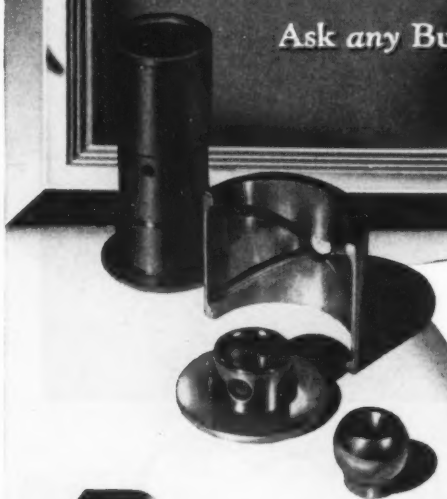
W. S. ANDERSON, Carolina Specialty Co., Charlotte, N. C.
HUGH WILLIAMS & CO., 47 Colborne St., Toronto 1, Canada

Among other obligations...

When an order is accepted the obligation to supply the commodity as stated in the contract is routine. But every purchaser knows that there are many other and additional services that the seller can render which serve the convenience and interests of the customers.

Along with every order accepted by the Bunting organization is also accepted the obligation to cooperate with the customer as well as to deliver the items as specified.

Ask *any* Bunting customer.



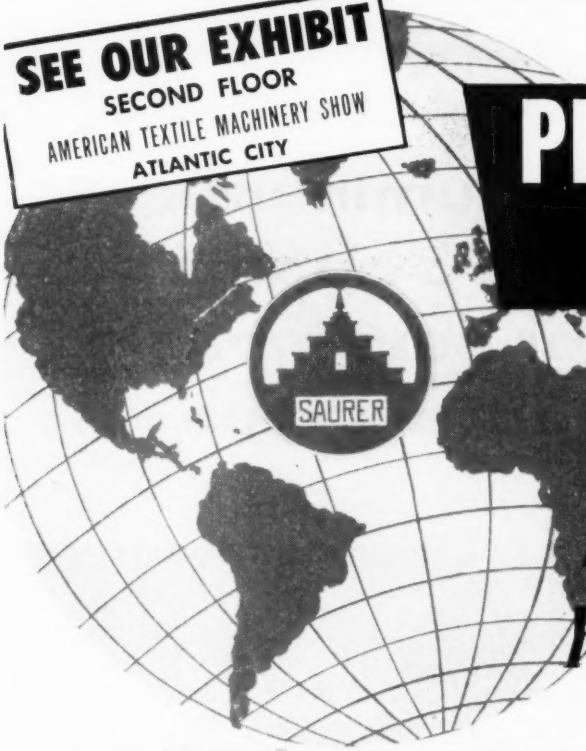
The sleeve bearing is not complex in structure; it conforms readily to design requirements; it is easily installed. Cast Bearing Bronze is the most adaptable of all sleeve bearing materials; it possesses excellent anti-friction properties. With proper film lubrication, its coefficient of friction is as low as can be obtained with any other bearing type. A successful Bunting Bronze bearing installation is readily attainable. We ask the opportunity to work with you, and to quote on your requirements.

Bunting®

BRONZE BEARINGS • PRECISION BRONZE BARS • BUSHINGS

THE BUNTING BRASS & BRONZE COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

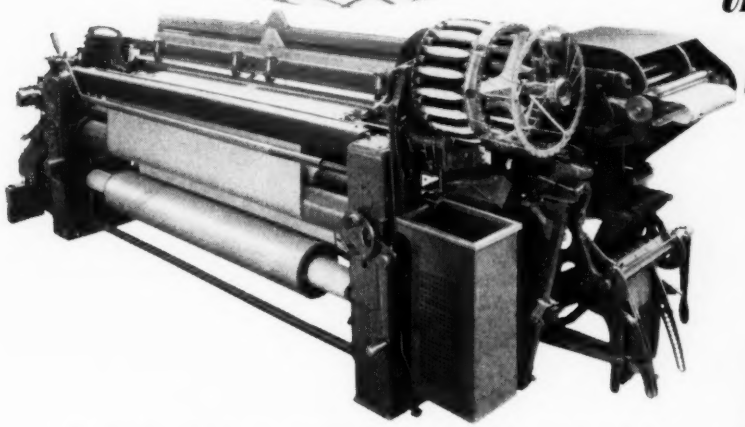
SEE OUR EXHIBIT
SECOND FLOOR
AMERICAN TEXTILE MACHINERY SHOW
ATLANTIC CITY

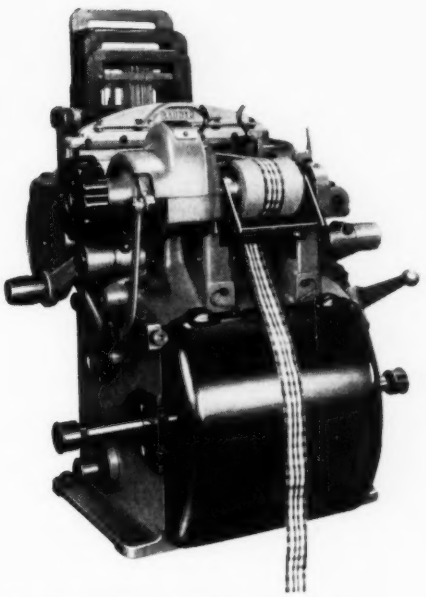


PERFORMANCE-PROVEN THROUGHOUT THE WORLD

FOR HIGH SPEED AND HIGH QUALITY

You too, can profit from their versatility and efficiency





• The fundamental design of SAURER broadcloth looms meets today's demand for **high speed** and **flexibility** of production. • Sturdy frame and low center of gravity minimize vibration. • Free of superstructure, SAURER looms too, are amazingly compact. • Interchangeable accessories make possible the alternate weaving of cotton, woolens, synthetics in weights as varied as sheer muslins or medium-heavy canvas. • Precision-machined units throughout assure trouble-free service even under severe use. • Replacement parts, although seldom needed, promptly available.

FOR INCREASED PRODUCTION AT LOWER COST, FOR EASE OF OPERATION, SEE... COMPARE SAURER EQUIPMENT!

SAURER

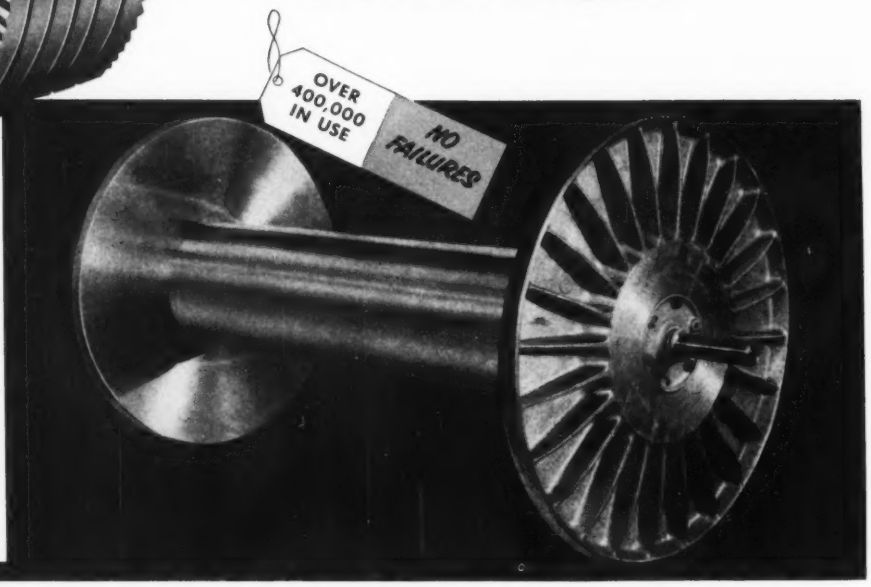
SOCIETE ANONYME ADOLPHE
S A U R E R
ARBON • SWITZERLAND

HAE—S68—3.54

Attention: Tire cord producers and processors

Aluminum warp beams offer seven basic advantages

- Better balance
- Glass-smooth barrels
- Lighter weight
- No crushing
- No deflection
- Cleaner
- Stronger



If your company produces or processes tire cord, you should know about aluminum warp beams. Particularly adaptable to operations involving synthetic fibers, aluminum warp beams are made stronger to resist deflection and crushing. They weigh up to 80 lbs. less than wood—reducing shipping costs and minimizing handling and stacking effort.

Aluminum beams are a machined product...in perfect balance when you get them and in perfect balance throughout their extra-long life. America's leading beam manufacturers can supply you with aluminum beams, so call their representatives today. They are:

Hayes Industries, Inc. — **Hubbard Spool Company**
Milton Machine Works, Inc. — **Briggs-Shaffner Co.**

If you'd like additional information on these cost-cutting beams, call your nearby Alcoa sales office, listed under "Aluminum" in the classified section of your telephone directory, or write: ALUMINUM COMPANY OF AMERICA, 2183-D Alcoa Building, Pittsburgh 19, Pennsylvania.

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

ALCOA ON TV brings the world to your armchair with "SEE IT NOW" featuring Edward R. Murrow, Tuesday evenings on most CBS-TV stations.

MICRO Precision Switches

Micro Switches are used—

as trumpet stops on combing heads

•

as carriage movement controls

•

to prevent needle breakage

•

to stop bobbin winding when bobbin fills

•

to automatically eject unfilled quills

•

to stop motor when gear box is opened

•

to control position of pressure roll on warper

•

to control tension on cloth measuring machine

•

as thread breakage detectors

•

to control cloth position as web unrolls

•

to position clamps on cloth stretching machine

•

as thread run out detector on loom shuttles

•

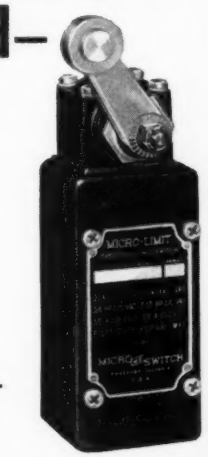
as selvedge build-up control

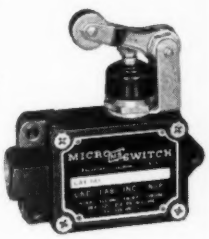
•

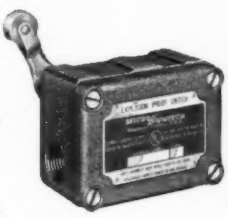
as fabric thickness detectors

•

and many other textile applications







See the switches that have cut production costs for hundreds of mill operators

MICRO SWITCH
BOOTH 839

AMERICAN TEXTILE MACHINERY EXHIBITION

Atlantic City, N.J.
APR. 26-30

• Thousands of textile machines have been given a new lease on life, made more automatic, more productive and safer by the installation of one or more MICRO precision switches.

Installation of these precise, dependable switches now permits many production operations to be performed electrically instead of by slower, less dependable manual or mechanical methods.

Shown on this page are just a few types of MICRO switches which have been found particularly adaptable to textile use. Each type is available with a wide variety of switch actuators. Many are ruggedly housed and protected from effects of dirt, dust, lint or humid atmospheres.

For advice on just the switch most suitable for your application, you are invited to contact the nearest MICRO SWITCH branch office. Expert engineering consultation will cost you nothing, may save you time and money.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
FREEPORT, ILLINOIS

H HONEYWELL

 For more information, write direct or use Reader Service post card.

A Proved Performer the WPF&M

HOT AIR SLASHER

HOT AIR DRYING at its best

UP TO 1500 LBS. PER HOUR

REASONABLE INITIAL COST

LOW OPERATING COST

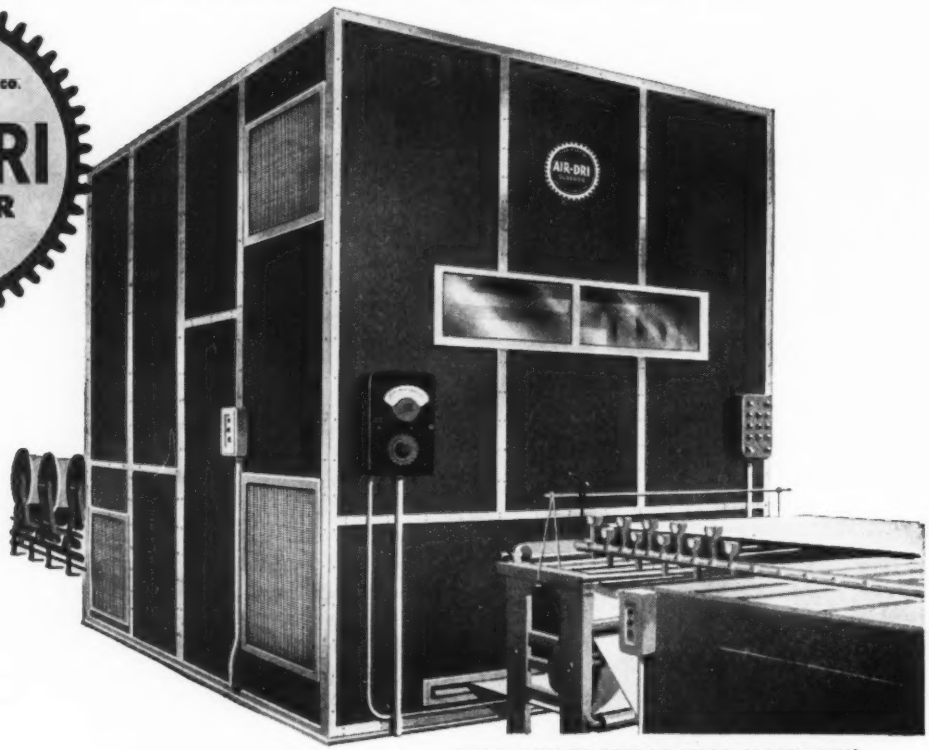
Here's a new high-production hot-air slasher, designed for natural or synthetic fibers, capable of greatly increasing production with little increase in space requirements.

With efficient new Air-Dri Slashers as replacements for out-of-date equipment, you can, in many cases, double and triple your slasher room output, eliminate overtime and greatly improve warp quality.

Yarn is 40% dry by the time it reaches the first guide roll because a wet splitting device divides the yarn into layers as it enters the dryer.

We will be glad to furnish you with detailed specifications for the advance-design Air-Dri Slasher on request.

WEST POINT FOUNDRY & MACHINE CO.
AIR-DRI SLASHER
WEST POINT, GA., U.S.A.



WPF&M

WEST POINT FOUNDRY & MACHINE CO.
WEST POINT, GEORGIA

WPF&M WARP PREPARATION MACHINERY

Air-Dri Slashers — Multi-Cylinder Slashers
Cyl-Air Slashers — Callaway Sample Slashers
WPF&M Hi-Speed 4 Cylinder Slashers
Standard 2 and 3 Cylinder Slashers

SLASHER MODERNIZATION EQUIPMENT

Hi-Speed Head Ends — Special Width Head Ends
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Stretch Control Units — Equi-Tension Creels
Temperature, Speed and Tension Control Devices
Size Boxes, Size Kettles, and Size pumps
Corduroy Cutting Machines and Brushers

For more information, write direct or use Reader Service post card.

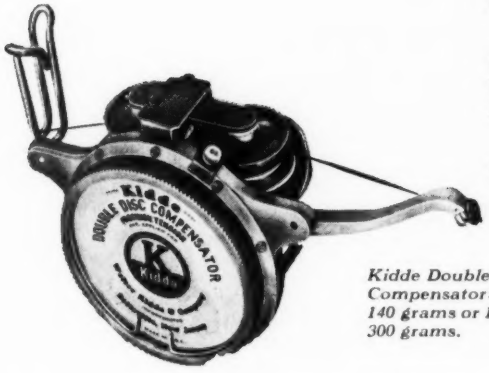
How they keep quill winding under their thumb at the Jean Ribbon Mills, Inc.

The Jean Ribbon Mills, Inc. of Paterson, New Jersey, makers of quality narrow fabrics, control quill winding on their German-made Hacoba quiller with Kidde Double Disc Tension Compensators.

They report they have fewer faulty quills, with fabric widths more uniformly controlled. There are closer yardage differences from one quill to another, with an actual increase in yardage. This results in less down time of the loom and reduces yarn waste.

Kidde's complete line of tension compensators is used by more than 500 leading textile mills throughout the nation—a striking tribute to their effectiveness in solving any tension problem.

They can help you turn out better products at less cost! Write today for full information.



Kidde Double Disc Compensator: 10 to 140 grams or 100 to 300 grams.

Kidde

Walter Kidde & Company, Inc.
491 Main Street, Belleville 9, N. J.

TEXTILE FINISHING MACHINERY

FOR THE TREATMENT OF EVERY TYPE OF FABRIC

- NAPPERS
- DRYING AND CURING EQUIPMENT
- SPECIAL FINISHING EQUIPMENT FOR THE WOOLEN INDUSTRY
- CLOTH ROOM EQUIPMENT

See Catalogs Photographs etc. at the **TEXPLANT EXHIBIT** BOOTH 1007 American Textile Machinery Exhibition **ATLANTIC CITY**

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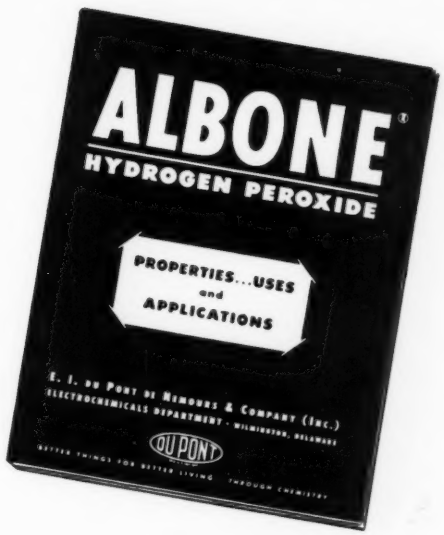
How can I use "ALBONE" 35 and 50 interchangeably?

What are the preferred construction materials for peroxide storage and bleaching equipment?

You'll Get the Answers to These and Other Questions in This New Reference Book...

This is the practical reference book for the textile processor, the man who is using "Albone" hydrogen peroxide to bleach cotton, wool, rayon and silk or in oxidation of vat colors.

You'll find information on economical peroxide bleaching...testing of bleach baths...efficient everyday handling of hydrogen peroxide in use and storage... and typical textile processing equipment, as well as other useful data.



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(HYDROGEN PEROXIDE)

"Albone" 35 . . . hydrogen peroxide, 35%
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E. I. du Pont de Nemours & Co. (Inc.) TW-44
Electrochemicals Department
Wilmington 98, Delaware

Please send me your new reference book on "Albone" hydrogen peroxide.

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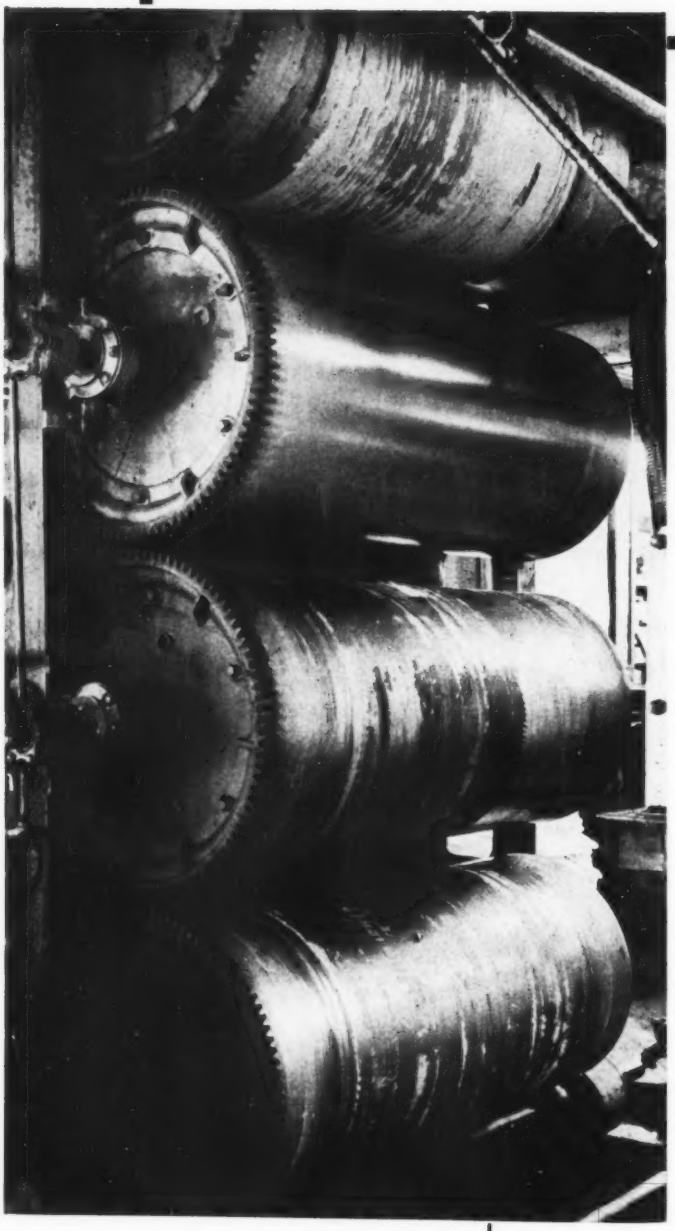
STOP SIZING STICKING WITH "TEFLON"*



ELIMINATE DOWN TIME and CLEANING PROBLEMS

"TEFLON" is one of the great advances in the textile field today. By eliminating or greatly reducing unwanted adhesion of sizing materials or dyestuffs, production can be greatly increased. Minutes instead of hours water and rags instead of steam, solvents and scrapers are all that is needed to change from one run to another. The elimination of build-ups on dry cans and slasher cylinders allows continuous high speed runs due to uniform heat transfer. Other machine parts that are being coated include—color boxes, rolls, fountains, embossing rolls, reels, etc.

This unretouched photograph graphically shows the difference between coated and uncoated cans after a run. The photograph is of a pre-drying unit at Ho-Ho-Kus Bleachery, Ho-Ho-Kus, N. J.

General Plastics Corporation, pioneer in the field of "Teflon" coating has enlarged its facilities to give the highest quality workmanship, while offering fastest possible service. The coating of textile machine parts often requires that the machine be "down" and General Plastics has attempted to keep that "down time" to a minimum.

"TEFLON" is being used in increasing quantities by textile manufacturers. Some of the largest chemical firms now recommend "TEFLON" to permit use of new sizing materials. Some of these have proved to be very excellent, but too sticky. Teflon coatings make their use possible.

"TEFLON" coated pieces to be shown at Booth 914 American Textile Machinery Exhibition

General Plastics CORPORATION

COATING • IMPREGNATING

169 3RD AVENUE PATERSON, N. J.

*E. I. DuPont reg. trademark for tetrafluoroethylene resin

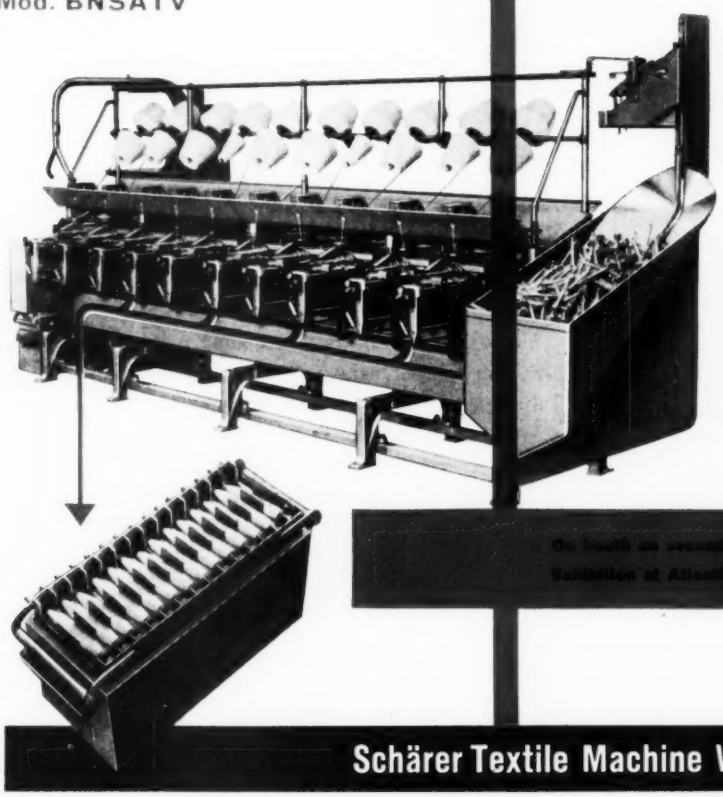
For more information, write direct or use Reader Service post card.

The best is just good enough !

Highly finished pirns produced at lowest cost by "Schärer" Superautomatic Pirn Winders

Schärer

Mod. BNSATV



Fully automatic pirn winder for automatic pirns, with automatic feeding of the empty pirns, swivelling creel for two supply packages, dust removing device and automatic stacking of the wound pirns. Most efficient machine for mills with a standardized production, suitable for winding speeds up to 8000 revolutions per minute. Great reliability of the machine is highly appreciated by all clients.

On booth on second floor Stage at the American Textile Machinery Exhibition at Atlantic City April 26—30, 1954

Sole Agents in the United States:
Yeomans Textile Machinery Co. Spartanburg, South Carolina

Schärer Textile Machine Works Erlenbach / Zürich Switzerland

Visit us in booths 292-293

for facts on

NEW STAINLESS STEELS

MAKE A NOTE RIGHT NOW:

Get news of the latest developments in extra-low carbon stainless steels and other special steels when you go to Atlantic City Auditorium for the American Textile Machinery Association Exhibition, April 26-30.

Armco engineers will be on hand in Booths 292-293. They will be glad to talk with you about special kinds of steels that may help you do a better job at less cost.

For example, you can see for yourself why Armco "ELC" (extra-low carbon) Stainless Steels protect weld areas from corrosion—while standard grades do not. This is especially important in vital wet processing equipment.

Find Out About "PH"

Other special stainless steels include the Armco "PH" (precipitation hardening) grades. These are workable chromium-nickel types that can be heat-treated to exceptionally high strengths and hardnesses.

Many textile mills are also finding money-saving uses for Armco ALUMINIZED STEEL and Armco Welded Steel Tubing.

Stop in at our booth so we can tell you about specific uses of Armco Special Steels. Our technical men will be glad to talk over any problems you would like to discuss.

ARMCO STEEL CORPORATION

3024 CURTIS ST., MIDDLETOWN, O. • EXPORT: THE ARMCO INTERNATIONAL CORPORATION

ARMCO

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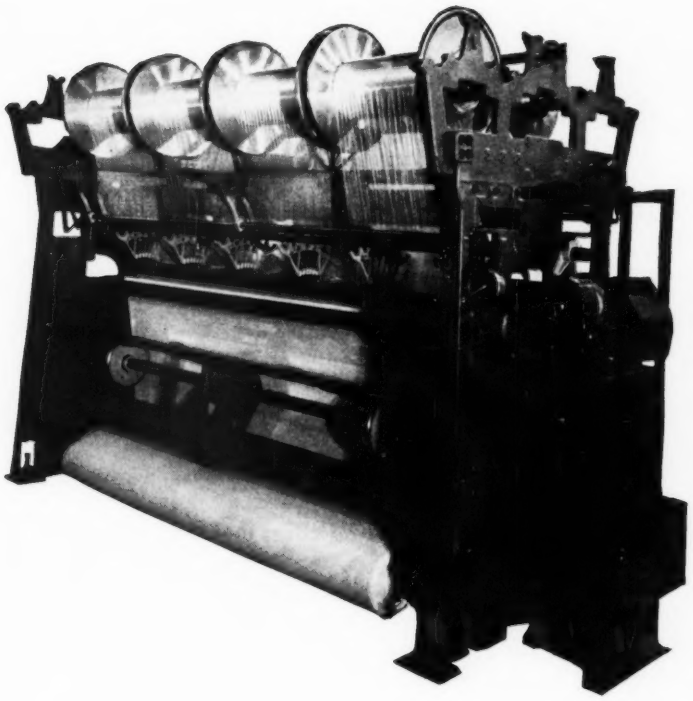
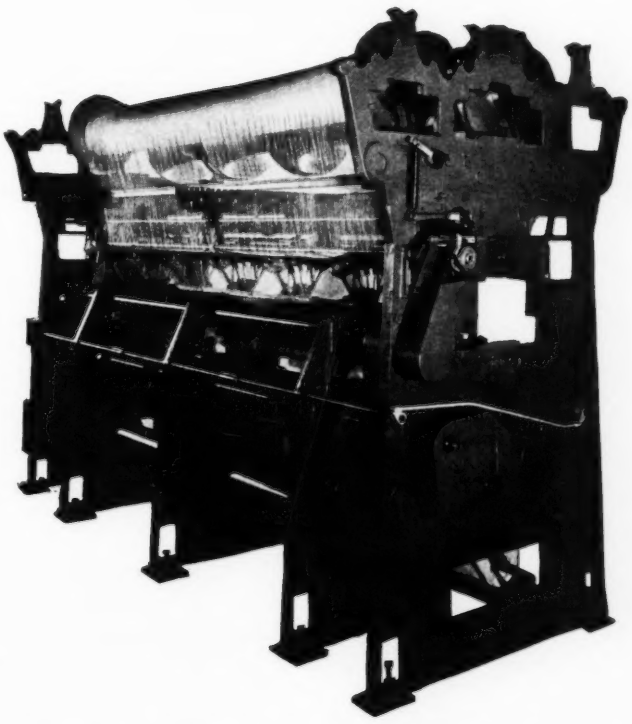


40 to 50% Faster!

NEW Model "E" KIDDE KNITTER

PRODUCTION speeds up to 500 courses with 2 guide bars... up to 400 courses with 4 guide bars can be maintained 24 hours a day with the new MODEL E KIDDE KNITTER. Consider what these new speeds will mean to your costs on elastic fabrics, tulle, shoe fabrics, etc.... what they will mean to your profits too!

A completely new machine, the MODEL E is equipped with high speed cams, totally enclosed and running in oil... double the usual number of guide bar rocker cams... pattern wheels or chain drum... quick stop... and practically non-breakable needles—all features never found in a Raschel machine before. Investigate how this machine can slash your knitting costs! Write for information.



Kidde Knitter

The word "Kidde" is the trademark of Walter Kidde & Company, Inc., and its affiliated companies.

KIDDE MANUFACTURING CO., INC. • BLOOMFIELD, NEW JERSEY

21 REASONS
for visiting the
PROCTOR EXHIBIT
IN BOOTH 506

You'll see this full scale equipment in operation.

1. The New Proctor Synthetic Card already making textile history by making it possible to produce fine yarn from stock in six steps.
2. An Entirely New Oscillating-Rotating Roll which opens new vistas for continuous fulling, washing, dyeing and dry finishing.
3. The New Proctor Preboarding Machine which will completely dry 46 dozen pairs of hosiery per hour and is priced at 15% to 20% less than other machines with a similar capacity.

You'll see large scale working models of

4. The New Proctor Loop Dryer
5. The New Proctor Tenter Housing
6. The Proctor Con-o-matic Washer for knitted fabrics
7. The Proctor Con-o-roll Washer

You'll see other models of

8. A Complete Line of Proctor Automatic Blending Equipment

You'll see sound color movies of

9. Proctor Automatic Blending Systems in operation
10. The New Proctor Synthetic Card in operation

You'll learn about the latest developments in

11. The Redman Process for Shrinkage control of tubular knit fabrics
12. The New Proctor Continuous Bleach System for tubular knit fabrics
13. The Proctor Open-Width Steamer for woven fabrics
14. The New Proctor Loop Ager for Print Goods
15. The Proctor Multipass Airlay Dryer for fine Finishing
16. The New Proctor Hot Air Slasher Dryer
17. Proctor Equipment for Nylon Setting
18. The Proctor Impact Dryer for Fibrous Materials
19. The application of proper continuous drying equipment for dyed and latex backed rugs.
20. New Proctor equipment for reprocessing all types of natural and synthetic fibers.

and finally . . .

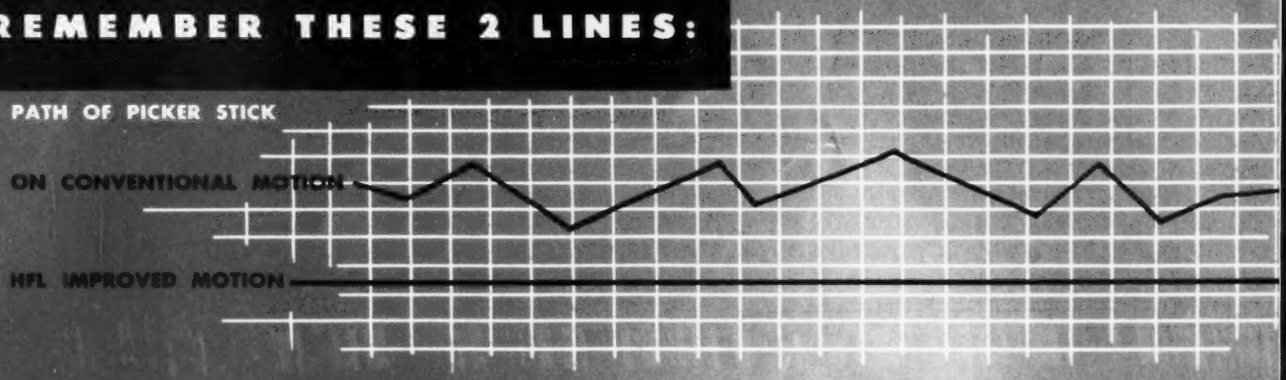
21. You'll have the opportunity to discuss your individual problems with the qualified Proctor representatives who will be in the booth all week!

Proctor & Schwartz, Inc.

PHILADELPHIA 20, PA.

for your Parallel Picking Motion,

REMEMBER THESE 2 LINES:



These are not symbolical lines . . . they are lines that show graphically the actual smoothness of operation now obtainable in the new

HFL IMPROVED PARALLEL PICKING MOTION

It doesn't take much imagination to visualize the high percentage of improvement in quality of your weave room production, and reduction of down time on your looms, when you use the radically new HFL Improved Parallel Picking Motion!

This opportunity for startling improvement in loom operation is quite typical of the entire line of

HFL IMPROVED LOOM PARTS

Send for a descriptive circular

You will be amazed at the comparative data shown, and with the many outstanding advantages now possible with the HFL Parallel Picking Motion.

HFL
IMPROVED LOOM PARTS

ESTABLISHED 1887

H. F. LIVERMORE CORPORATION

EXECUTIVE OFFICES & PLANT
BOSTON 34, MASS.

SOUTHERN DIVISION
GREENVILLE, S. C.

SOUTHWESTERN DIVISION
DALLAS, TEXAS

To the Employee Relations Director of every American company

LET'S FACE IT . . . the threat of war and the atom bomb has become a real part of our life—and will be with us for years. Fires, tornadoes and other disasters, too, may strike without warning.

The very lives of your employees are at stake. Yours is a grave responsibility. Consider what may happen.

When the emergency comes, everybody's going to need help at the same time. It may be hours before outside aid reaches you. The best chance of survival for your workers—and the fastest way to get back into production—is to know what to do and be ready to do it. To be unprepared is to gamble with human lives. Disaster may happen TOMORROW. Insist that these simple precautions are taken TODAY:

☐ **Call your local** Civil Defense Director. He'll help you set up a plan for your offices and plant—a plan that's safer, because it's entirely integrated with community Civil Defense action.

☐ **Check contents** and locations of first-aid kits. Be sure they're adequate and up to date. Here again, your CD Director can help—with advice on supplies needed for injuries due to blast, radiation, etc.

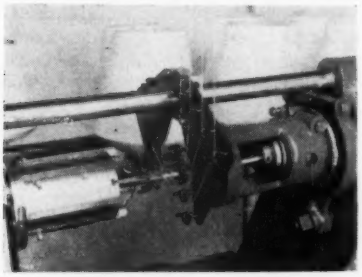
☐ **Encourage personnel** to attend Red Cross First Aid Training Courses.

☐ **Encourage your staff** and your community to have their homes prepared. Run ads in your plant paper, in local newspapers, over TV and radio, on bulletin boards. Your CD Director can show you ads that you can sponsor locally. Set the standard of preparedness in your plant city. There's no better way of building prestige and good employee relations—and no greater way of helping America.

Act now . . . check off these four simple points . . . before it's too late.

TEXTILE *Equipment* NEWS

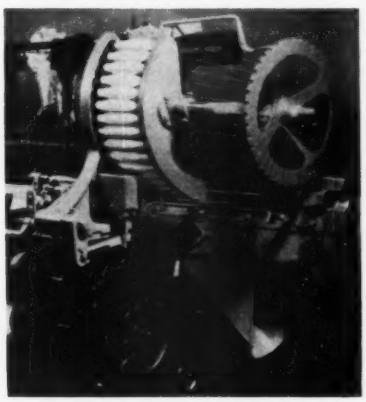
Details on Fidelity's "Braided Rug" Machine



KNITTING HEAD of the Sinfra single-head knitting machine, manufactured by Fidelity Machine Co., Inc., 3908-18 Frankford Ave., Philadelphia 24, Pa., makes "braids" for "braided rugs" [TW, Nov. '53, p. 164] by knitting a cover over a filler core. This is an eight-gauge machine. The knitting head is equipped with 16 needles with a 15/16-in. head opening and a four-lobe cam-and-core assembly. Eight short and eight long needles are alternately spaced. Features of the machine are said to be: lock stitch prevents unraveling; spiraling stitches keep the cover from bursting; and color combinations are unlimited. Production is 2,520 ft. of covered filler core per hour. Price of the machine is $4,325, including crating.

Circle T-39 on Reader-Service Card

German Company Makes Bobbin Changers for Looms



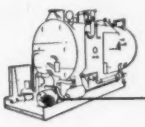
BOBBIN-CHANGING ATTACHMENT is fitted to old looms without constructional changes. This overpick loom has also been equipped with a hydraulic buffer to replace the checkstraps.

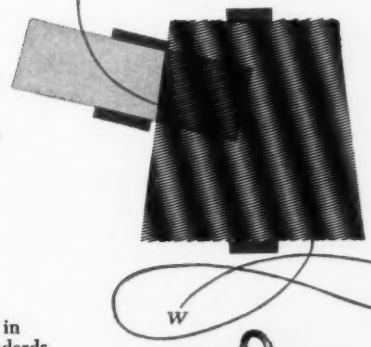
Automatic bobbin-changing attachments for converting nonautomatic to automatic looms are manufactured by Auerbach & Co., Oldenburg, Germany. The attachments can also be supplied on new automatic looms.

Bobbin-changing attachments for

THE MARK OF AN EXTRA DEPENDABLE TEXTILE MACHINE

ED ELECTRO DYNAMIC

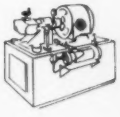




The red "power spot" on textile machines means *powered by Electro Dynamic*, the most dependable motors *ever* available to industry.

For *proof* of this *extra dependability* send the coupon below for your copy of **"MOTOR SHOWDOWN"**, a new candid report on comparative results of motor performance tests* conducted in accordance with A.I.E.E. standards.

*Tests certified by J. Arthur Balmford, Professor of Electrical Engineering at a leading Eastern university.



ELECTRO Extra DYNAMIC dependable motors

1 to 250 hp. AC and DC. Standard or special purpose. N.E.M.A. standards.

ELECTRO DYNAMIC • ***Division of General Dynamics Corporation***
165 Avenue A, Bayonne, New Jersey

Please send me a copy of "MOTOR SHOWDOWN" and the new catalog of Electro Dynamic industrial motors.

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Textile and Dyestuff manufacturers

rely on ATLAS

FADE-OMETERS

LAUNDER-OMETERS

for speed and dependable results in research and for quality control in production. Products that must be guaranteed —

- not to, deteriorate or fade easily under sunlight.
- against loss of color or shrinkage from laundering or dry cleaning.
- against colors bleeding in laundering.
- for permanence of fungicides, fire-proofing, moth-proofing and other finishing agents.
- and other deteriorating effects of light and laundering.

More is required of modern fabrics than ever before if they are to stand up in competition today. The Atlas Fade-Ometer and Launder-Ometer will give you dependable test results in a minimum of time and at minimum cost.

Write for information on the new Atlas Scorch Tester for testing damage due to chlorine retention.

ATLAS ELECTRIC DEVICES COMPANY

361 West Superior Street, Chicago 10, Illinois

WEATHER-OMETERS • FADE-OMETERS • LAUNDER-OMETERS

underpick or overpick woolen or cotton looms can be fitted without constructional changes to the loom. A feeler device controls the bobbin change, and a stop motion operates if the bobbin and shuttle are out of alignment. Scissors cut the ejected filling end.

Zama hydraulic buffers are manufactured by Auerbach to replace check straps, and beam brakes and warp stop motions can be supplied to complete the conversion.

Circle T-40 on Reader-Service Card

Plans Made Available for Dobby-Equipped Handloom

THIS HANDLOOM was built to produce experimental patterns by Walter A. Simond, 15 Mansfield Ave., Essex Junction, Vt., who has now made the plans available. Nine drawings, two dimension sheets, and other instructions cost $7. The dobby drum control was installed to make pedal work easier. The dobby drum has 12 rows of pins for each of four harnesses. The loom is 36 ins. wide.

Circle T-41 on Reader-Service Card

Double Cones Increase Circular Production

Spring-equipped double-cone attachments for circular knitting machines with a rotating yarn rack are being manufactured by Roto-Ties Co., 449 Tilgham St., Allentown, Pa. Advantages of the patented units are said to be: (1) More production at less cost, (2) costs of smashes saved, (3) fewer press-offs from cones running out, (4) quality improved, (5) reloading stoppage reduced, and (6) waste yarn reduced.

The double-cone device can be easily put on ¼- to ⅜-in. yarn-plate spindles. Larger spindles can be replaced by bolting a complete unit to

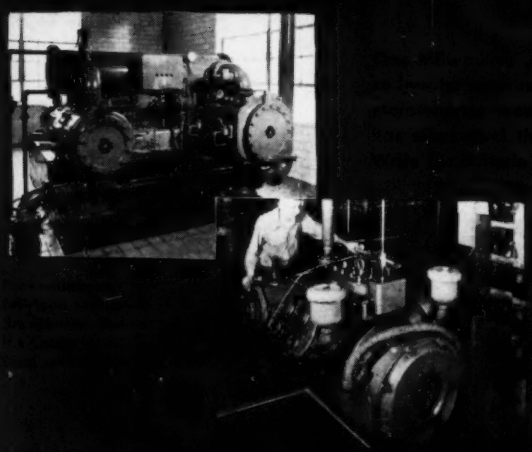
pure air...

— that's free from oil, and safe for food, textiles, instrumentation systems —

at low cost...

— operating and maintenance costs comparable to those for an ordinary compressed air system

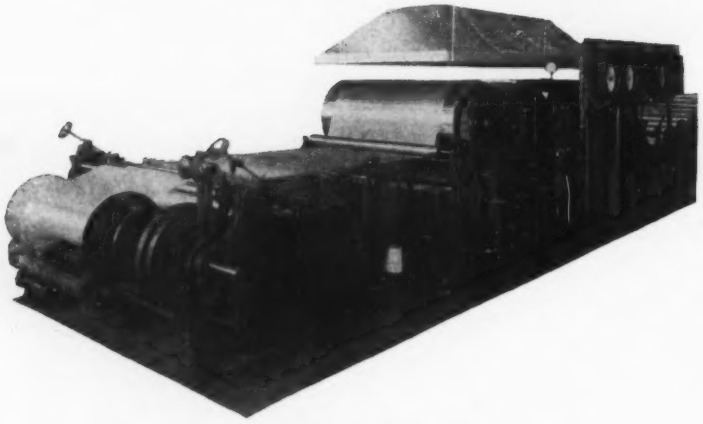
with the



GARDNER-DENVER

 For more information, write direct or use Reader Service post card.

READY TO RUN
when it arrives at your mill!



Every JOHNSON Sizer is assembled and started up at the plant before it is shipped.

This system assures you a machine on which all parts fit and that is ready to run when it arrives at your plant.

It is painstaking care such as this, as well as outstanding excellence of design, that have won the Johnson Sizer such acceptance in manufacturing centers the world over.

Johnson Sizers are being used to size synthetic yarn and cotton warps in Asia, Continental Europe, The British Isles, North and South America, Australia, and Africa.

Another factor that has such tremendous appeal to mill men is the sturdy construction of Johnson Sizers that assures years of trouble free service without repairs or replacement of parts.

FOR EXAMPLE,

One Johnson Sizer sized warps for 320 looms, running three shifts, for 4½ years without a single breakdown.

If you are interested in performance like this, write today for our 16-page illustrated folder with point by point description of Johnson Sizers. Also for insert showing various quetsch arrangements for sizing different types of warps.

Charles B. Johnson

MACHINE WORKS

24 Piercy Street **Paterson, New Jersey**

DOUBLE-CONE DEVICE for circular knitting machines is slipped onto ½- to ⅜-in. yarn-plate spindles or attached to the yarn plate if larger spindles are in use. This unit is used for cotton or woolen yarn.

the yarn plate. The bobbin is adjustable to any size cone.

A full cone of yarn is put on the small bobbin and the large bobbin is pushed through that cone; then another full cone is put on the large bobbin, and the cone ends are pigtailed together. The cones cannot fly off because the spring locks them to the spindle.

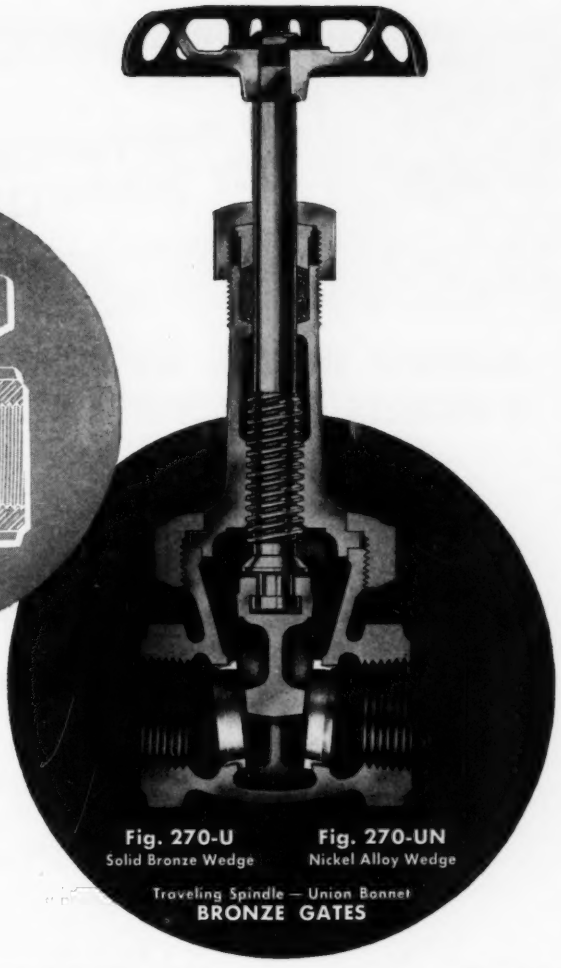
Circle T-42 on Reader-Service Card

Dye-Package Wrappers

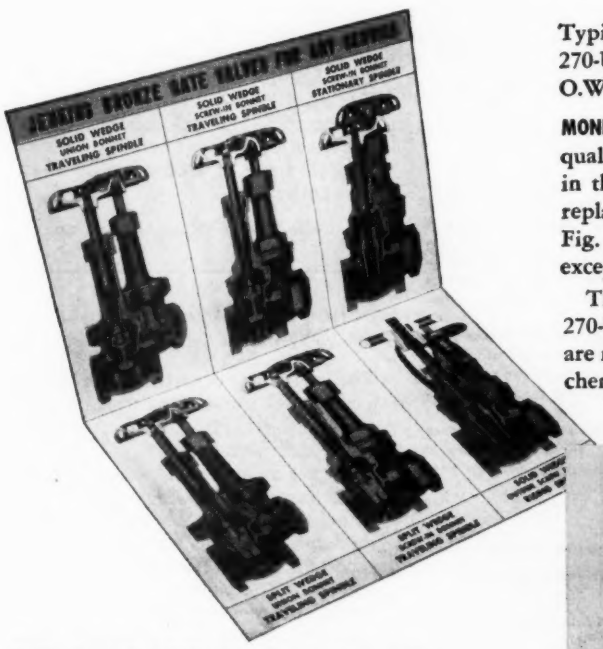
IMPROVED WRAPPERS for spiral-spring and perforated-tube dye packages have an increased rate of penetration and an improved wet strength. Made by Technical Papers Corp., 25 Huntington Ave., Boston 16, Mass., the wrappers keep yarn from snagging on spiral springs and carry a better dye penetration to the inner windings of yarn on a perforated tube package.

Circle T-43 on Reader-Service Card

Built-in $AVING$ make JENKINS BRONZE GATES your BEST BUY



Look over any of the 35 patterns in Jenkins complete line of Bronze Gates. You'll find *savings* built into every valve. Jenkins valve specialists designed each one for easy maintenance and extra long wear. Try them on your toughest services and see why they take top-rating in any test for endurance and economy. Jenkins Bros., 100 Park Ave., New York 17.


JENKINS BRONZE GATE VALVES FOR ANY SERVICE
SOLID WEDGE UNION BONNET TRAVELING SPINDLE
SOLID WEDGE SCREW-IN BONNET TRAVELING SPINDLE
SOLID WEDGE SCREW-IN BONNET STATIONARY SPINDLE
SPLIT WEDGE UNION BONNET TRAVELING SPINDLE
SPLIT WEDGE SCREW-IN BONNET TRAVELING SPINDLE

Jenkins Bronze Gate folder shows the many types available — lists convincing reasons why they are your best buy for any service. Ask for Form 181-A.

Typical of Jenkins design for built-in savings are the Fig. 270-U and Fig. 270-UN Gates for 200 lb. Steam, 400 lb. O.W.G. services.

MONEL AND BRONZE SEATING COMBINATION In Fig. 270-U a high quality bronze wedge seats against MONEL rings expanded in the body. The wedge takes the wear — it can easily be replaced when necessary by slipping a new one on the stem. Fig. 270-UN, with a nickel alloy wedge, is recommended for exceptionally severe conditions of rapid wear and corrosion.

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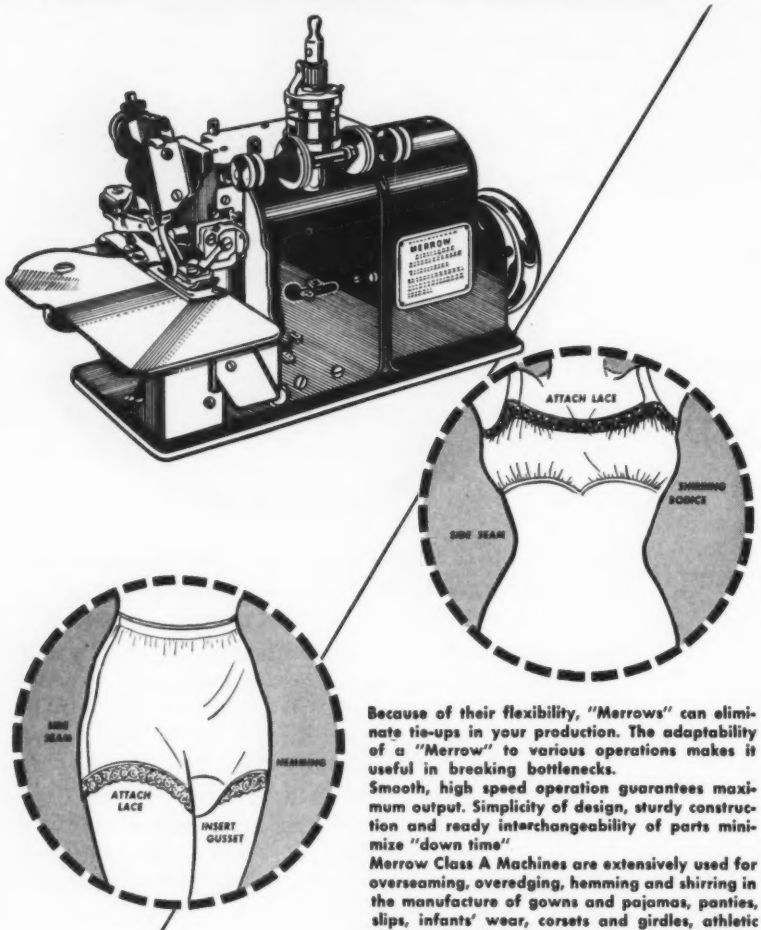

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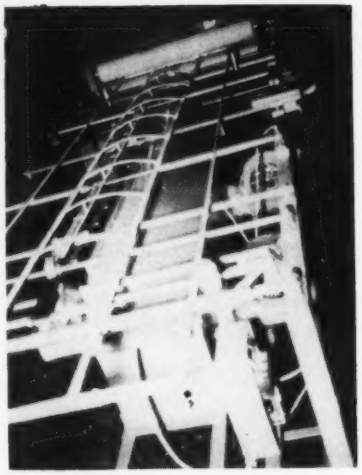
Machine Puts Plastic Backing On Tubular Knit Goods



PLASTIC-BACKING MACHINE for tubular knit goods operates at 20 yds. per min. This picture shows the gumming, drying, and slitting, but not the roll-up devices

A machine for gumming, drying, slitting, and rolling up tubular knit goods has been developed by Joseph Pernick Co., Inc., 5419-23 Flushing Ave., Maspeth, L. I., N. Y. The machine performs this work in one operation at up to 20 yds. per min.

It has a pin-tenter attachment to keep the cloth from twisting or turning; so the cloth is slitted in the center of the gumming line. The drying unit is complete with two blowers and electrical heaters with thermostatic control. A motor-driven cutting machine does straight and clean slitting.

The roll-up device is driven from the main machine. The machine handles all types of jersey and interlock knit goods.

Circle T-44 on Reader-Service Card

Scheduled Style Changes

CONTINUED FROM PAGE 89

The planning department furnishes a layout for weave-room style changes every four weeks. The layout is revised each week.

Weave-room second hands check their looms for warp run-outs at the end of their shifts. Warps are checked for loom and style number, and the expected time of the run-out is also marked. The run-out sheet is given to the shift overseer. The shift overseer uses the sheets made out by the second hands and the planning-department layout to make out each second hand's warp-replacement schedule

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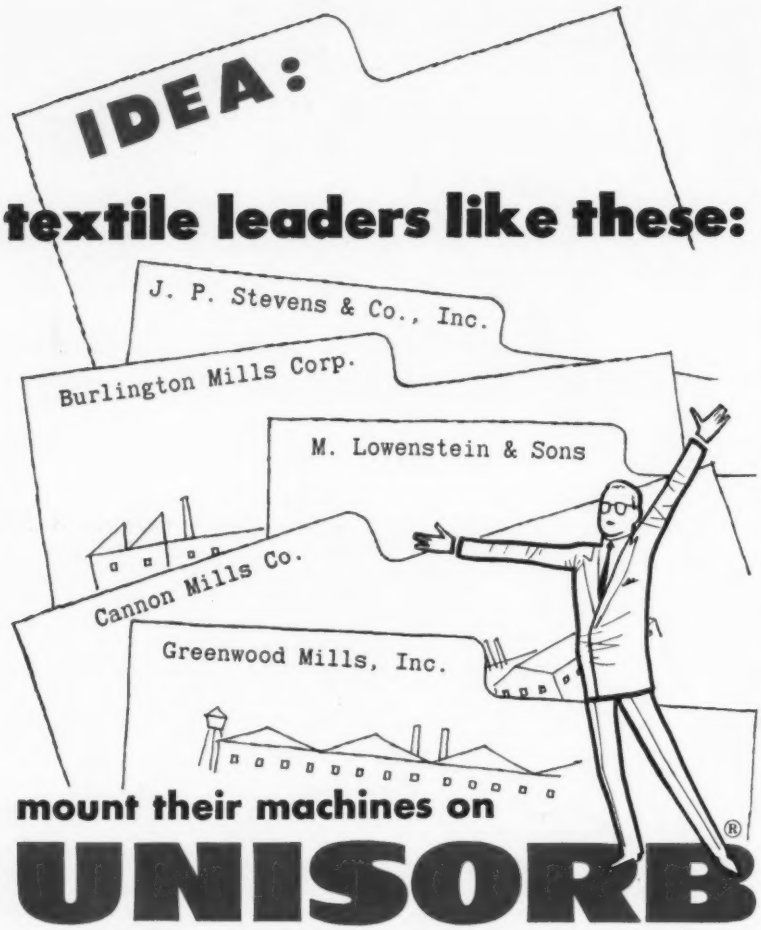

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for the next shift. He marks the warps that are to be retied and those that are to be cut out and replaced with drawn warps.

Each overseer uses the schedule as a guide in scheduling work for tying-in-machine men and warp-replacement men. He also orders warps from the slasher room and drawing-in room to be brought to the weave room at an exact time according to the time on the scheduling sheet. For this reason, the scheduled time must be accurately made.

Settings Begin With New Warps

Drawn warps placed in the looms are set up by second hands' instructions. If other warps are running on the same style, a standard setting is used. The standard settings are established by the second hands and shift overseers and are checked by the superintendent before adopting.

Settings for 250 different styles call for a large variation in the settings. A style book containing swatches of every style of cloth run over a long period of time is kept in the weaveroom office. The cloth construction, including the filling and warp number, the picks per inch, and the pattern- and box-chain drafts, are kept with the swatch. Loom settings are also contained in the individual-style record.

Warp changes make it necessary to rearrange sets of looms and sections of looms each week. Several colors of metal flags or markers are attached to the looms to designate a given set of looms.

This same color layout is used by the first-shift overseer of weaving to lay out the sets of looms. For example, one set of looms will be marked with yellow flags and the next one red. A different color will continue throughout the entire weave room or until the color repeats at a distant set of looms.

New Patterns Affect Quality

Since looms running with three or four shuttle boxes in motion ordinarily require more attention than looms running only one or two shuttles, the various sets and sections are laid out each week according to the styles of cloth being woven. Looms are inspected often to keep them in good mechanical condition.

Cloth inspection at the loom is one of the most important parts of cloth-quality control made necessary by frequent style changes. Two inspectors on each shift do nothing but inspect cloth at the looms. The result is a reduction of second-quality cloth because both warpwise and fillingwise

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GLASS

defects are caught soon after they

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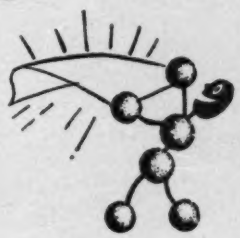
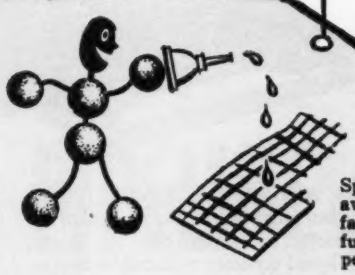
Fabrics smell better, look better to the buyer because of the high stability of Twitchell Oils. Treated fabrics possess maximum resistance to rancidity, yellowing or staining with age... remain fresh and appealing longer.





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Twitchell 7250—(All Fatty) Best for maximum rewetting speed, and for shirtings, dress goods and other light-weight, bright-color work where stability and softness are essential.

Weaver's Jobload

GLASCO

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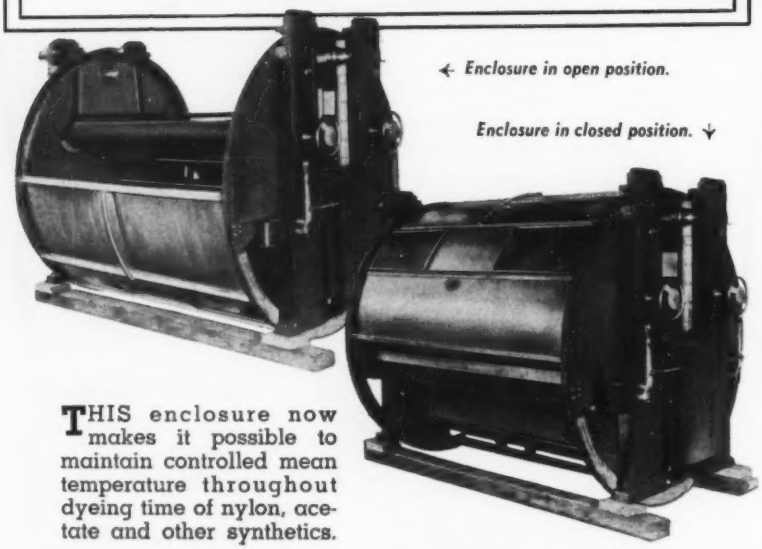
Dyeing of Synthetics



← *Enclosure in open position.*

Enclosure in closed position. →

THIS enclosure now makes it possible to maintain controlled mean temperature throughout dyeing time of nylon, acetate and other synthetics.

As a consequence, dyeing time is shortened. Uniform stripping is assured in redyeing or changing the color of a fabric. Chrome blues and other difficult colors can be jig-dyed. Colors are well dispersed, and level dyeing without selvage shading is possible. In soaping, temperature is prevented from rising too high and so causing a dull finish. Steam and water are saved.

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New design of hood saves space—no overhead obstructions, doors on stainless steel rollers swing down and under jig when open—minimizes dripping—prevents steam blast toward operator when hood is opened—no cables, chains, counterweight posts to obstruct. GLASCO jig enclosure can be fitted to any jig—note big windows for easy observation of interior when jig is closed.

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defects are caught soon after they start.

Many styles of cloth have to be inspected and graded on both the face and back in the cloth room because of the peculiarity of the weave. It's on this type of fabric that weaveroom inspection pays off, since the inspectors can give their full attention to finding defects.

Daily second-quality cloth records for sets and sections of looms are kept by individual loom numbers. Second hands' second-quality cloth records are kept weekly.

Even with the large number of style changes in this weave room, the replacement schedule and control of cloth as it is woven keeps the production and first-quality-cloth record high.

Adjustable Cleaners

CONTINUED FROM PAGE 95

top and bottom creels. These two jets are fixed side by side at the lower end of each arm. The jet aimed at the lower creel also keeps the thread board clean.

A large tube fixed over the two smaller blowers directs air to the ring rail and spindle rail.

The nozzles on the ends of the adjustable tubes are made from rubberized canvas so that the nozzles do not interfere with machine projections such as starting handles. This idea allows a more accurate concentration of the air where it is required and is a safety feature if the nozzle strikes an operator.

All 10 Air Blasts Are Controlled Individually

Each opening and nozzle has a vent that can be regulated to shut down the supply of air according to the degree of blast required. If the jet is too strong, say on the top creel, that blast can be reduced without affecting the other air deliveries.

The cleaner is used at present on 40s yarns and is expected to work well on coarse yarns at Joanna. Superintendent J. L. Delaney is looking forward to the day when the new-type cleaners are installed throughout the spinning room. Mr. Delaney expects the device to pay for itself in a year. A cleaning hand has been put on other work, and the major cleaning operations that were done each week end are now done once every three weeks.

Perhaps more important is the effect of the cleaner on quality. Fewer gouts and imperfections have been noticed in the yarn. Spinners and doffers also like the new cleaner because their work has been made easier.

Weaver's Jobload

CONTINUED FROM PAGE 94

3. *Piece end*

Description: While grasping the broken warp end in his left hand, the weaver takes a repair piece of yarn from the package attached to the loom arch. He ties a weaver's knot and positions the end for the next element.

Element begins: As the operator reaches for a length of repair yarn.

Element ends: As the knot is released after the long ends have been clipped close to the knot.

It requires four more elements to complete the starting of the loom for this particular loom stop. Element No. 3 could have been separated into the two elements "secure repair piece" and "tie knot and position," but these two elements can be combined without causing difficulties in calculations.

Separate Variable Elements

Another point to remember is to separate fixed and variable elements. The important variable in the weaving job is walking. As a timestudy element, it must be kept separate from other elements unless the walking is part of another element, such as front or back inspection while patrolling.

The variable element "walk to stopped loom" is dependent on the average distance required to walk to each stopped loom, and this distance is dependent on the number of looms and their arrangement in the set.

Inspection operations show considerable variation; but from the standpoint of being part of the job, they are a fixed element. They must be determined by averaging selected times of a number of individual inspection operations.

Determine Frequencies of Stops

The next group of data has to do with the number of stops during peaks, valleys, and on the average. A loom usually has periods of running good and periods of frequent stops. But taking the average of all the looms in a set over one shift, the total number of stops per loom hour varies but slightly as long as the same fabric is woven.

It is necessary to separate stops due to warp-end breakage, filling breakage, and mechanical stops. Each type of stop requires a different amount of the weaver's time. Roughly speaking, filling stops take twice as much time as mechanical stops and warp stops take four times as much time as filling stops.

Intentional stops not made by the weaver need not be counted unless the weaver must restart the loom.

Suppose that a loom-stop study shows that a certain style of cloth on

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TEXTILE LEATHERS

a certain type and model of loom is producing 0.11 filling stops, 0.13 warp stops, and 0.06 mechanical stops per loom hour—a total of 0.30 stops per loom hour. Another model of loom or fabric style would probably have a different frequency.

With this information and the time required to repair the stops, we can calculate the average time one loom requires of a weaver in an hour.

If we take 0.30 min. as a reasonable time to start a loom after a mechanical stop, 0.50 min. for a filling break, and 2.00 mins. for a warp break, the total average time required to service one loom is 0.333 min. per hour. $(0.06 \times 0.30 + 0.11 \times 0.50 + 0.13 \times 2.00)$. If a weaver were assigned 100 looms, he would spend 33.3 mins. starting stopped looms each hour.

These allowances are liberal for 42- to 46-in. XD and XK looms. You can scale them up or down to suit your own equipment, but they won't vary much. The 0.30 loom-stop frequency may be a little low, but it is in the normal range for synthetic yarns running on well-fixed automatic looms.

Allowance for Inspection

The next question is: How can we measure the time for inspection and then allow enough time in the job assignment to permit the inspection?

Establishing the time required to perform an inspection is not easy because the labor is mental and the individual's effectiveness has to be roughly gauged from his past record for quality. For this reason and because quality is of prime importance, it is wise to be liberal in this allowance.

To measure inspection time, an inspection procedure has to be established. One satisfactory technique is to study the practices of the weavers who run the best jobs.

Assume that the set is to be patrolled all the time when stopped looms are not being serviced. The patrolling should have a uniform pattern as far as practicable. Elements are:

1. Patrol and inspect front

Description: Check condition of bobbins, condition of warp yarn between harnesses and the fell of the cloth, and quality of the woven cloth. Run tips of fingers over width of the cloth, look into bobbin can to check transfer motion, and observe cloth rolls. If necessary, clear and wind loose filling ends on battery hub.

Element begins: As inspection of loom and cloth begins.

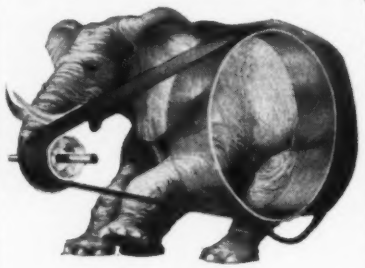
Element ends: As next element begins.

Approximate time: 0.10 min., including necessary walking.

2. Patrol and inspect back

Description: Inspect warp yarn between harnesses and beam; inspect

PULLINGRIP



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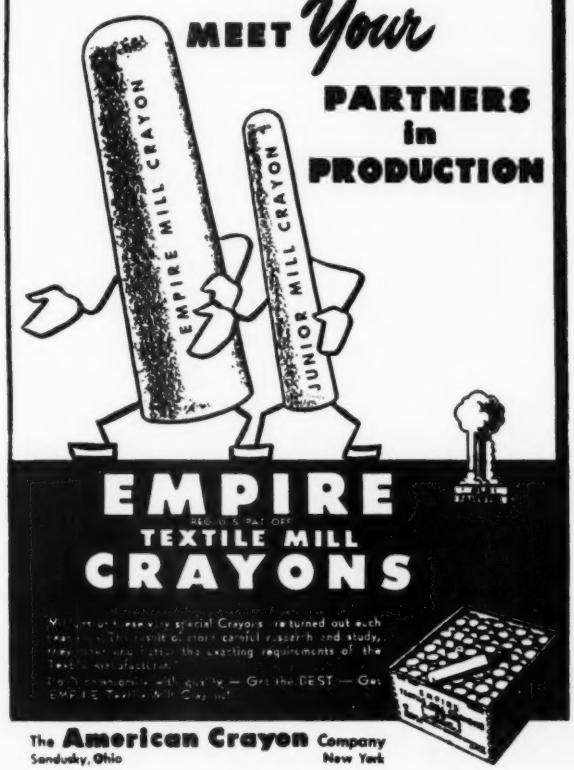

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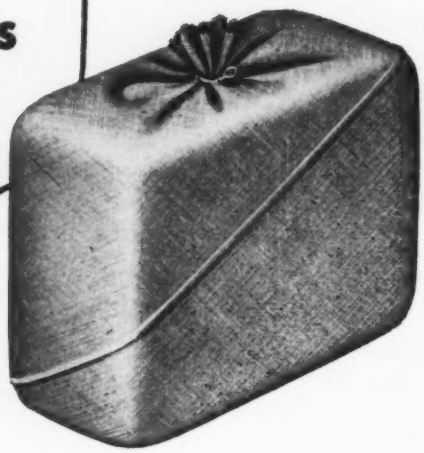

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There are various grades of burlap and, of course, variations within those grades.

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You can always look to Bemis for the best in burlap!

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tween harnesses and beam; inspect loom beam and warp.

Element begins: As inspection of loom and warp begins.

Approximate time: 0.10 min., including necessary walking.

3. *Inspect with aid of electric drop light*

Description: Inspect looms as described in Element No. 1, but with greater care. Special attention is given to quality of woven cloth and condition of warp yarn.

Element begins: As inspection of cloth begins.

Element ends: As next element begins.

Approximate time: 0.25 min.

4. *Inspect with aid of flashlight*

Description: Same as No. 3 except flashlight is used instead of the electric light.

Approximate time. 0.20 min.

How Often To Inspect

How often should a loom be inspected? This question is the real heart of the weaving-assignment problem.

Regardless of the job assignment and time available for patrolling and inspecting, the weaver will inspect as much as he believes is necessary to give the level of quality that he thinks is satisfactory. Too small an assignment often results in poor quality because of the low level of the challenge and the loss in interest. A considerable overload can be carried by good weavers for relatively short periods of time; they can speed up their manual operations when stops are running high for an hour or so. But if overloading continues, the weaver's problems pyramid, and both efficiency and quality seriously suffer.

Inspecting 100% of the cloth is the maximum amount of time to spend for this operation; but from a practical standpoint, the situation will seldom warrant 100% inspection. However, make the first calculation on the basis of 100% inspection to see what assignment would result.

Using the same data as before, we have 0.30 stops per loom hour (0.06 mechanical, 0.11 filling, and 0.13 warp), 0.30 min. per mechanical stop, 0.50 min. per filling stop, and 2.00 mins. per warp stop. To these data we add loom speed and picks per inch; for example, 92 ppi. and 162 ppm., with a loom efficiency of 92%. This combination gives us 1.72 ins. per min.

About 9 ins. of cloth are visible between the fell of the cloth and the breastboard; so a new 9 ins. of cloth is presented every 5.23 mins. (9 ÷ 1.72).

A liberal time allowance to inspect the loom and the 9-in. strip of cloth would be about 0.08 min. Hence, on

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the basis of 100% inspection, a weaver would handle enough looms to permit him to start stopped looms and complete an inspection circuit every 5.23 mins.

We calculated 0.33 min. per loom hour to service each loom. To this time, add the inspection time for each loom per hour (0.08 times the number of 9-in. strips made by one loom each hour). The calculation is:

Number of 9-in. strips = $[1.72 \times 60] \div 9 = 11.5$ per hour

Inspection time = 11.5×0.08
$= 0.920$ min.
$+ 0.333$ min.

Service time = 1.253 mins. per loom hr.

With 60 weaver minutes available each hour, the number of looms that could be handled would be:

$60 \div 1.253 = 48$ looms

Under normal weaving conditions of 0.30 stops per loom hour, the minimum assignment would be 48 looms; a further reduction in assignment would have little effect on quality.

Quality Determines Inspection

What would be the upper limit of assignment?

The controlling factor is quality, which gets worse as effective inspection is reduced from 100%.

On the point grading system, a cut of cloth is judged first or second quality depending on the number of defects and their total point value per 100 yds. Only one major defect can be charged to a yard, regardless of how many tolerable defects there are. (Certain defects are not tolerated and must be cut out, but these defects are so infrequent that they need not be considered here.) So if a running defect can be corrected before more than one yard is run, only one major defect can result.

In our example, at 92 ppi. and 162 ppm. at 92% efficiency, it requires about 36 hrs. to weave 100 yds. With average stops of 0.30 per loom hour, there will be about 11 stops during the weaving time for 100 yds.

If 9 out of each 36 ins. were inspected during weaving, we would be sample inspecting at the rate of 25%, which the statistical-quality-control people would say is close inspection if the normal level of quality is good.

The time per loom hour to inspect once every yard is: Yards woven per hour × inspection time.

In our example: Yards per hour = $[1.72 \times 60] \div 36 = 2.87$

Inspection time = 0.08

Inspection time per hour = $2.87 \times 0.08 = 0.23$ min.

Add the normal stopped service time of 0.33 min. per loom hour, and

NOW BOGER and CRAWFORD OFFERS

PLUS 4

HIGH TEMPERATURE DYED YARNS

1. FASTER COLORS
2. MORE COLORS
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4. FOR ALL TYPES OF YARNS

ORLON . . . NYLON . . . COTTON . . . MERCERIZED . . . YARNS are now dyed by BOGER & CRAWFORD with their new PLUS-4 HIGH TEMPERATURE method! Advantages are many! Faster Colors! A greater range of colors! Tested Colors! For all types of yarns!

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Boger & Crawford is also "tops" in bleaching . . . its bleached yarn is *permanent* white, widely used for knitting.

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GUARANTEE
The Quality of Boger & Crawford Yarn is guaranteed — the highest tribute we can pay it!
Signed
Fredericka Boger

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LOWELL Shuttles

DOGWOOD OR PERSIMMON FIBRE-COVERED OR PLAIN

1. Shuttle for carpet loom 2. Shuttle for automatic wool or worsted loom 3. Shuttle for plain worsted loom 4. Shuttle for automatic cotton loom (equipped with brass threader) 5. Shuttle for automatic cotton loom (equipped with cast iron threader) 6. Shuttle for silk or rayon loom (equipped with Paterson tension and fibre covered on one side)

LOWELL SHUTTLES, widely recognized for their quality for more than half a century, include automatic and non-automatic types for all kinds of textile fibres and mills. Lowell Fibre Covered shuttles prevent roughing-up of yarns and the covering is applied to stay. The wood is thoroughly seasoned, carefully dried and finished to specifications. Shuttles can be furnished with automatic tension eyes, if desired.

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SALES REPRESENTATIVES

Hendrik Van Brederode, 311 Godwin Ave., Midland Park, N. J.; W. P. Russell, P. O. Box 778, Atlanta, Ga.; West Philadelphia Supply Co., Emerald and Somerset Sts., Philadelphia, Pa.; E. B. Smith, P. O. Box 3085, Greenville, S. C.

you get the total service time of 0.563 min. per weaver hour.

Assignment = 60 ÷ 0.563 = 106 looms.

Is this the ultimate weaving assignment for the example?

Not necessarily. There is nothing final about 25% cloth inspection. It may or may not give the desired results. If the number of stops per loom hour shows little fluctuation from hour to hour and day to day and the weavers are effectively patrolling throughout the entire shift, quality and efficiency would be high.

Loom-Assignment Refinements

In this analysis, many simplifications were made to avoid the confusion of trying to juggle too many factors at one time. For example, the jobload calculations were based on the assumption that the weaver patrols and inspects right up to the stopped loom, which side steps the problem of the variable "walk to stopped loom."

No mention was made of the effect assignment has on efficiency. This problem is involved and requires the determination of machine interference and delay, warpouts, fixing, and other minor causes for loom stoppage.

Union Underwear

CONTINUED FROM PAGE 77

motion, a knob is pulled to load the unit and the machine is started by a push button.

A red light on the machine indicates a stoppage to the knitter. If the stop occurred because of a hole caused by faulty yarn, a mark is entered on the cloth piece ticket. If faults become too prevalent in one piece ,the fabric roll is inspected over a lighted frame. This method insures a constant check on the yarn at all times.

A Veeder-Root counter on each machine is driven from the vertical dial-drive shaft. These counters tabulate machine revolutions; and knitters' pay is based on machine efficiency, which is calculated from the actual revolutions made compared with the 100% efficiency of the machine. This method saves knitters and management trouble and time.

Magazine Creels Cut Downtime

The Brinton rib machines have streamlined red plastic cone holders that are arranged to allow magazine creeling. This arrangement saves machine downtime because it allows the

You can profit *4 ways* if you get on Pittsburgh's "books" now!

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2 Complete laboratory control of dyestuff production and processes. To achieve exacting Quality-Control in dye manufacturing, our dyestuffs plant maintains completely equipped analytical laboratories where all production and application processes can be duplicated and controlled on a laboratory scale.

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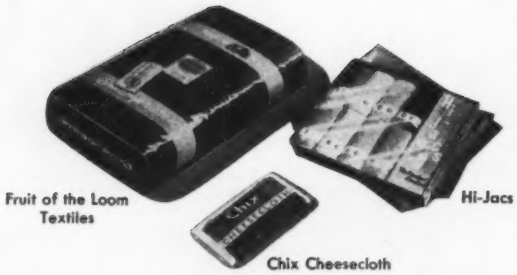

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A HAYSSEN-WRAPPED PACKAGE
BY THE WRAPPING IT KEEPS!

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Regardless of size or shape, you get a neat, tight wrap on every package with a Hayssen automatic wrapping machine. *Wrapping's easier!* Also, production men report savings up to 80% over previous wrapping costs.

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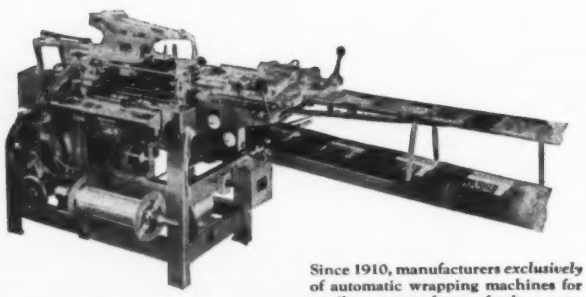
No complicated adjustments from size-to-size on a Hayssen. No gears or sprockets to remove or change . . . no need for expensive mechanics to change size, either. So simple the operator does it on the job.

more sturdily built

Hayssen's simple, rugged design, using fewer moving parts, keeps these machines working and saving through years of dependable, trouble-free service. Every moving part is in the open and easily reached for maintenance and cleaning.



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machines to keep running while the empty yarn cones are replaced with full ones.

The pigtail tie-up method requires the machine to be stopped for the empty cone to be lifted from the full cone. The magazine method uses two cone holders for each feed. The outside cones are arranged at an angle pointing to the porcelain above the center cone holders. The yarn end of the outer cone is tied to the pigtail of the inner cone.

When the yarn is knitted from the inner cone, the empty cone is removed and replaced with the outer cone while the machine is running. A full cone is then placed on the outer creel and the yarn tied to the inner-cone pigtail.

To keep fabric and machines clean, lint is blown from the knitting machines about every 30 mins. The air hose is used to blow the lint into the central alleys for a sweeper to remove.

Fabric rolls are sorted out in widths and stored until required for cutting. Then the rolls are put through a continuous bleaching range to make the cloth absorbent, soft, and a uniform white.

Nine Motors Control Range

The bleaching range, built by Wiesner-Rapp Co., Inc., processes the cloth at 350 ft. per min. Nine motors drive various rolls at speeds to get the best bleaching results. These speeds are controlled individually or collectively by an operator at a central control panel.

One operator feeds the cloth rolls to the head of the machine. The fabric revolves on a semicircular arrangement of free-running rollers to reduce tension on the fabric as the fabric is drawn between two rolls to a scray, where another operator sews the fabric in circular form on a Union Special double-chain stitch machine. A colored marker is sewed on the join between each fabric-size change. The sewing-machine operator indicates to the controller each change in fabric size.

The fabric is drawn out of the scray in its flat form to a conveyor and delivered to a wet-out box to break out the surface tension of the cloth. A chemical saturator follows the wet-out box. A small generator on the saturator-unit motor controls an indicator on the control panel to show the speed of the cloth in yards per minute.

The operator at the control box checks the alkalinity of the bleaching solution every 30 mins. The peroxide, silicate, and caustic solutions are pumped from outside tanks through a

mixing chamber in various proportions determined by three pumps. Dials on the control panel indicate the pump activity.

The degree of bleaching is carefully controlled by the air pressure on the top roll of the saturation box, the liquor ratio, the speed of the machine, the temperature of the J-box, and the time in the J-box.

Fabric in J-box Is Carefully Controlled

The fabric is loaded into the J-box from the saturator and remains in the J-box for about 52 mins. Steam is metered to the lower part of the box, and the temperature is kept constant at 190° F. Six thermocouples at two different levels in the box give an average temperature reading on the instrument panel.

Port holes in the J-box indicate the level of the cloth, which varies according to the fabric width going in and coming out.

The fabric is lifted from the J-box by a roller, and a hot-water spray rinses off the bleaching solution as the fabric leaves the J-box. A neutralizing bath then removes alkalinity, and the fabric passes through an optical whitening bath. An operator at the delivery end of the range guides the bleached cloth into a stainless-steel truck. Each truck contains only one size of cloth, and every truck load of fabric is checked for pH.

Several ideas by Union's technicians have been adopted to improve quality and increase production to 143,000 lbs. per week. A Micro switch above each pressure roll is operated to stop the range if a tangle occurs and lifts the top roll. Bearings have been moved outside of funnels to prevent grease dripping on the cloth.

The fabric is dried on a National drying machine for 30 mins. at about 240° F. and passed through the rollers of a Tubetex calender. The fabric is spread to the best width to give the least shrinkage. Steam at the calender rolls and a lattice over which the fabric runs after pressing also minimize shrinkage. Fabric is laid out flat to relax and is tied with two tapes.

A conveyor lifts the fabric to the cutting room. The conveyor is an endless belt operated by switches on both floors. A truck containing fabric is pushed on the conveyor, and a lug on the conveyor catches the truck axle. The bottom switch is pressed, and the truck is deposited in the cutting room.

T-Shirts Are Cut On 150-ft. Tables

The cutting tables are 150 ft. long,

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Want a bigger share of a market of 28 million people? Then plan to move your operation Southeast, where savings in distributing costs alone will probably more than pay for your move.

How are others doing here? Take Georgia, for example, where the value of manufactured products last year rose to $1,355,318,000 — a 378.4 per cent increase over 1939. (National average 339.5)

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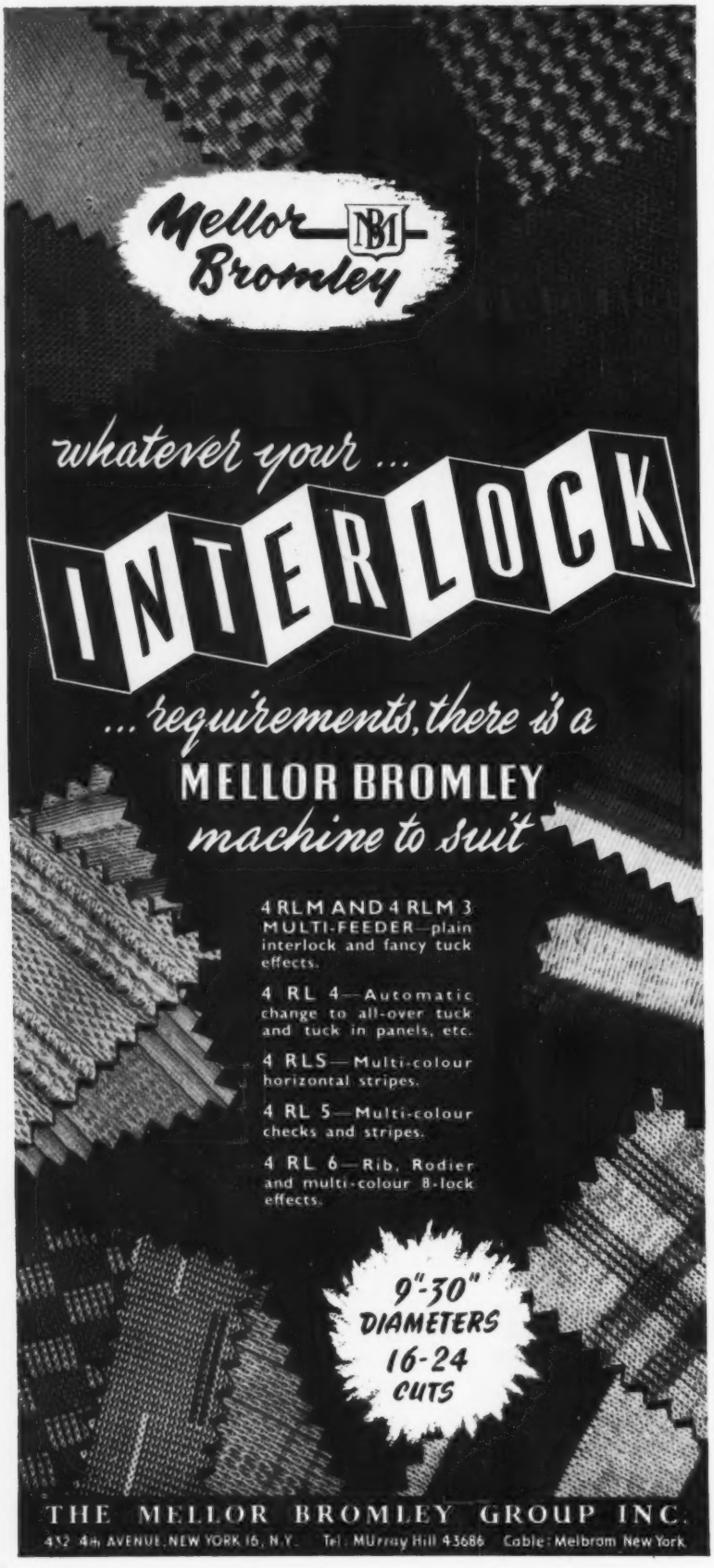
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and 576 layers of fabric are laid up at one time. T-shirts are separated into 4-doz. lots by tissue paper.

Seaming operations are laid out in sections. One section processes boys' T-shirts, three sections seam regular flat-knit T-shirts, and one section seams rib T-shirts. Each sewing machine has an individual motor so that the machines can be moved to provide greater speed, efficiency, and flexibility. Power feed rails suspended from the ceiling allow practically any machine arrangement.

Seaming tables have a section cut away around the body to allow seamers to handle their work easier. Athletic shirts are kept tied while neck and arms are reinforced with nylon, and shoulders are flatlocked and tacked. Excess tape and flatlock ends are trimmed off together on a Trimaster machine.

A steam press developed at the mill has boosted pressing production of athletic shirts to 2,000 doz. daily. Six tables at right angles to a conveyor belt have spring-loaded release arms to keep the garments straight during folding. The operator releases the garment from the frame with a foot pedal and places the folded garment on the conveyor.

The steam-press bed is automatically timed to stop the conveyor and press the garments under the bed at predetermined intervals. Four girls at the delivery end of the press remove the garments, attach stickers, and place the garments in a box.

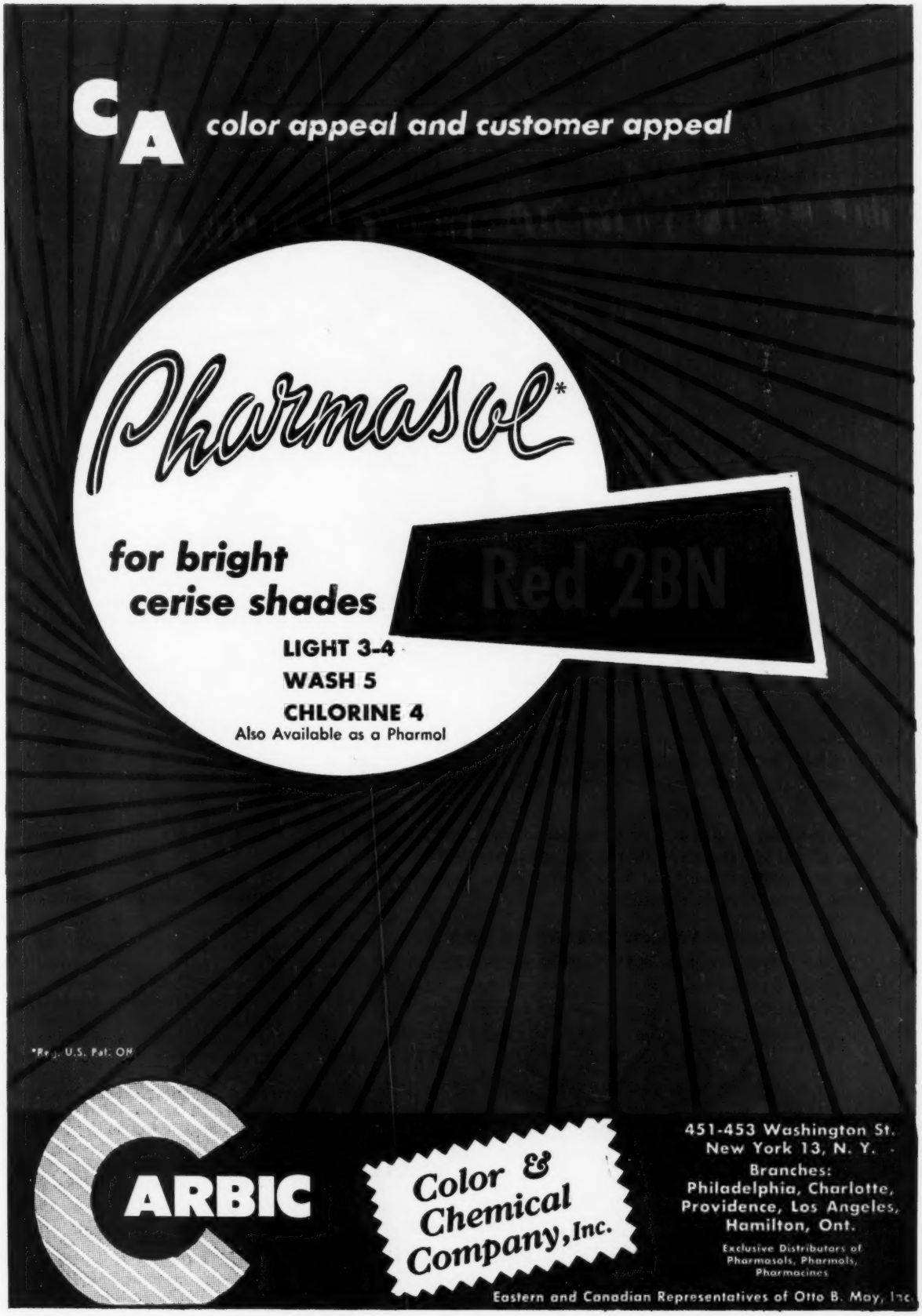
Conveyor System Cuts Cost

Another conveyor cuts costs in the packaging section. Each girl along the conveyor is supplied with a pile of briefs. The briefs are folded on a board and placed in a cellophane bag. The board is withdrawn and the bag placed upright in the conveyor chute. An Amsco sealing unit closes the package, and the sealed packages are guided to a conveyor in the correct position for a girl to pick up six packages and place them in a box.

Orders are made to stock, and garments are often shipped on the same day that the order is received.

An air-cooling system that is also used for heating in the winter supplies comfortable working conditions in the large 440x180-ft. seaming and finishing room. A loud-speaker provides music at certain periods, and a cafeteria located in the building seats 400 at a time. Free milk is provided by the management from an automatic dispenser twice daily.

Attention to worker needs has supplemented Union's modern methods and machines to increase production, cut costs, and improve quality.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Sweaters knit from butter-soft, lofty Orlon yarns, dyed by Globe, have the cashmere-like quality that delights the heart of style-and-comfort-conscious women without exception.

This is not surprising for Globe technicians had a leading role in the development of present methods of Orlon dyeing, and Globe dyers have been dyeing it continuously ever since, in production quantities.

FOR DYEING ORLON YARN, YOU CAN RELY ON GLOBE.

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Globe does package dyeing on tubes, skein and warp dyeing, warp mercerizing, and sizing.

Yarns we process include cotton, rayon, worsted, nylon, linen, blend and novelty yarns. Also Acrilan—Dacron—Orlon.

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Exploring the Community

CONTINUED FROM PAGE 101

ing, could be clothed a full year for the price of one spinning frame. And to replace all Cone Mills spinning frames would be equivalent to clothing 76,722 families for a year.

More than 200 four-year college tuitions could be met for the half-million-dollar replacement cost of the 10 fabric-printing machines in Cone plants.

And 14,503 families could eat for a year with the $12,748,000 necessary to replace the more than 3,000 cards owned by all Cone mills.

How Machines Make Jobs

Anyone knows what his own dollar can buy. To have the story of textile machines told in terms of the employee's dollar brought new meaning about a great industry to the people of Greensboro, North Carolina, and other textile-mill communities.

The local community interest aroused by the comparative costs of capital equipment expanded into other communities also. Part of the story, and most important of all in the final community-relations angle, is given in terms of what the corporate investment means to the economic well-being of its home town, its state, and the South.

Cone Mills Corporation, because of its machine investment, was able to pay out $46,500,000 in 1953 in wages and salaries. It used 400,000 bales of cotton, for which it paid $60,000,000. An additional $46,000,000 was paid out for other materials and services.

The booklet is a community-relations job that, like a pebble tossed in a pool, creates a far wider concentric ripple than was thought possible.

Pointers for Supervisors

CONTINUED FROM PAGE 99

optimistic description of his chances. But in many cases, you can give specific assistance by recommending the most likely direction in which he can go.

In cases where you think the suggestion will be well received, you may want to mention weak points that, when strengthened, will better suit him for employment: "Brushing up on your technical know-how would qualify you for a higher-paying job."

And if you can say it sincerely, add finally. "If I can be of help at any time, please let me know."

7. Remember the Face-Saving Angle

For many an individual, the toughest aspect of the situation lies in con-

cern over the reaction of fellow employees. Sometimes, by just taking into account an individual's sensitivity regarding his standing in the group, you can ease the shock. Give him a chance to save his face. Make him seem less of a failure.

There's no reason for you to catalog an employee's deficiencies in public. In anything you may say to other employees, you need not condemn or criticize the ability or personality of the man who's leaving. The simple statement "He didn't fit in" is usually adequate.

8. Smooth the Departure

It will make a big difference to the employee's peace of mind, as well as the reaction of colleagues, if the departure is handled according to a logical plan.

It's unwise to have the employee flounder across the finish line. Left to his own devices, he is apt to become a destructive force. On the other hand, there are usually things that require attention: your company's severance procedure may need explaining; you may have to arrange an appointment for the individual to see some one in the personnel department. Departmental or company-wide severance procedures should be followed carefully.

In general, it's desirable to have a discharged subordinate leave as soon as possible. But try to give him a chance to bow out gracefully. He would probably like to say good-bye without seeming to sneak off under a cloud.

Your attitude provides the principal key to the others. You can clearly show there is no reason for shame in his leave-taking, no hard feelings, no reason for doubts or resentments.

9. Analyze the Case

There's a lot to be learned from dismissals. Questions like these help your analysis:

Why was the dismissal necessary?

What went wrong?

When should the trouble first have been detected?

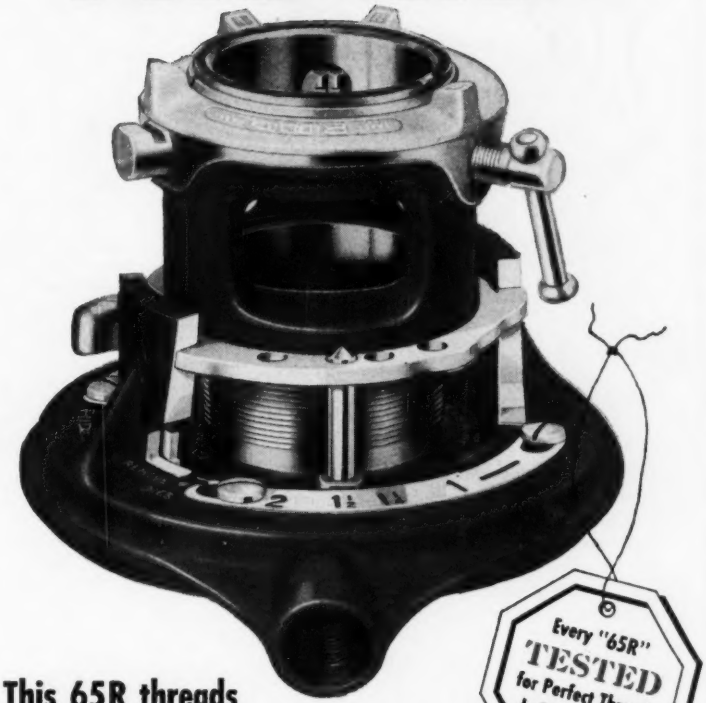
Where exactly was the weakness? Was it your own inability to size up the man at the applicant stage? Did he receive sufficient training? Were orientation efforts made on his behalf intelligent and sufficiently strong?

And finally, the clincher:

How could it have been prevented?

The more intensive a study you make of your dismissals, the less of them you are likely to have. This brings automatic benefits—greater efficiency and better integration of your group as a whole—for the future.

For Trouble-Free Pipe Threading
...its a 65R
RIDGID



This 65R threads 1" to 2" pipe with 1 set of dies ...and it won't jam!

You won't find a die stock to equal this popular 65R—anywhere! It saves time—one set of self-contained high-speed dies adjust to 1", 1¼", 1½" or 2" pipe or conduit in 10 seconds! Mistake-proof self-centering workholder sets to size instantly! It saves trouble—lead screw won't jam, it kicks out automatically when standard length thread is cut. Clean perfect threads, *fast!* For trouble-free extra-easy pipe threading buy 65R at your Supply House.

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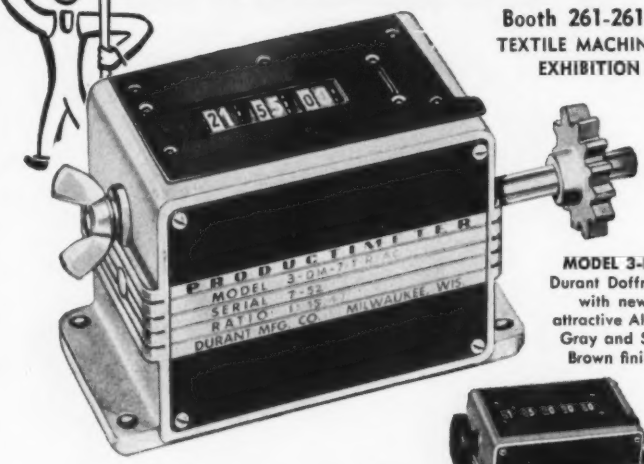
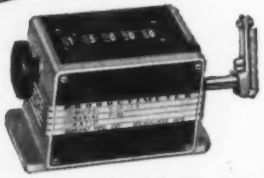
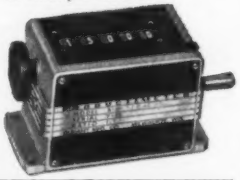


MODEL 3-DM
Durant Doffmeter with new, attractive Alaska Gray and Seal Brown finish.



High speed, small, compact SP Predetermined Counters adaptable to many Textile applications. Available in Stroke and Rotary. Counts up to 2000 per minute.



This is the newest addition to the Productimeter line of textile counting machines. The Durant Doffmeter is a compact, predetermined counter designed to cut off the loom or signal when the preset number of yards is reached. Eliminates cut marks and waste ends by assuring uniform yardage . . . simplifies inventory control.

Present day high costs make the installation of Durant Doffmeters on every loom a practical money saving investment. Plan now . . . write or contact us for detailed information.

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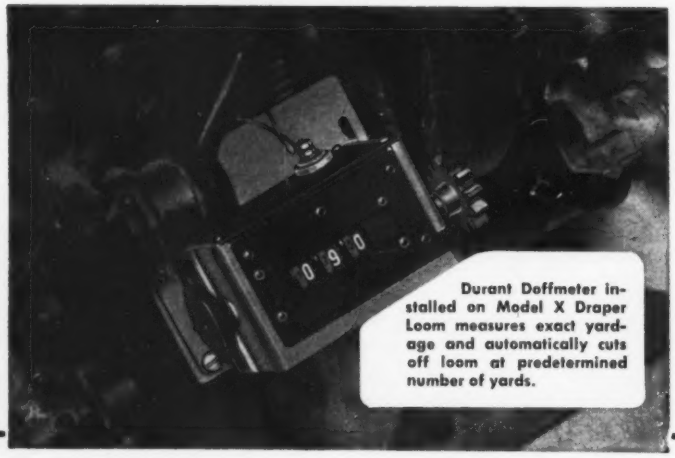

Durant Doffmeter installed on Model X Draper Loom measures exact yardage and automatically cuts off loom at predetermined number of yards.

Plant Maintenance Show

CONTINUED FROM PAGE 91

► Safety against explosion caused by the controls of automatic doors in areas where chemicals are stored or used is guaranteed by a new door-opening switch made by The Stanley Works, Magic Door Div., Lake St., New Britain, Conn. The switch can be fitted to any existing door made by this manufacturer. The door is opened when the switch is pressed with finger tips in any direction.

► A heavy-duty wax applier with a removable chenille pad was shown by S. C. Johnson & Son, Inc., Racine, Wis. Chenille is said to do the same job as lamb's wool and at one-third the price. The pads do not shrink when cleaned in hot water. The applier costs $2.75, complete with three pads.

► An extension for its stud driver was shown by Remington Arms Co., Inc., Bridgeport 2, Conn. The extension allows heavy-duty studs to be driven with low-cost cartridges. Also shown was a new guard for fastening 2x4 wood sections to concrete or steel.

THIS NEW VALVE features loose ball disks in a Venturi design that provides accurate flow control in all positions from wide open to a tight shutoff. The valves resemble rising stem-gate valves but have a loose ball disk instead of the conventional type. The ball is actuated and carried by a cage attached to the valve stem. The rolling action of the ball permits unusually free, easy operation. In operation, the ball moves to and from the center of flow and rolls into and out of the body seat ring. In the closed position, the ball is mechanically locked against the seat by a wedging surface on the ball cage. The valve was shown by Crane Co., 836 S. Michigan Ave., Chicago 5, Ill.

► Heavy-duty paper wipers for industrial use were shown by Scott Paper Co., Chester, Pa. The new wipers come in a pop-up box and can be used to dry the hands or clean around machinery.

► A week-end floor-reconditioning method was announced by Camp Co., Inc., 6958 S. State St., Chicago, Ill. Miracle-Floor is

said to make possible the patching and re-

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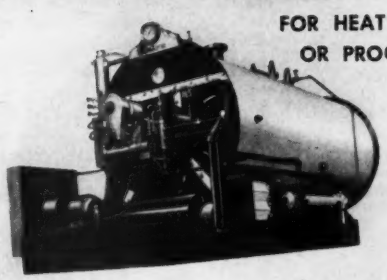

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Superior Steam Generators are manufactured in 18 sizes from 20 to 600 b.h.p. for pressures up to 250 p.s.i. or for hot water heating.

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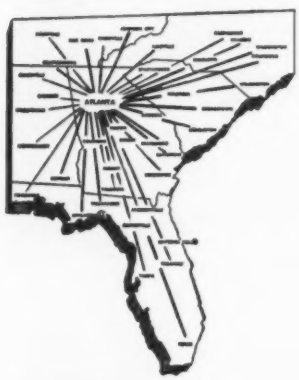

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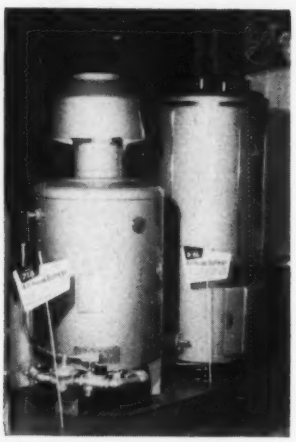
said to make possible the patching and reconditioning of all types of flooring exposed to continuous water, grease, acid, alkali, etc.

▶ Two new floor-maintenance products were shown by Dura-Tred, Inc., 357 N. Central Park Blvd., Chicago 24, Ill. Bonds-Rite is a heavy-duty floor-resurfacing material for concrete floors that makes a perfect bond and has high resistance to oils, acids, and alkalis. Floor-Kap, another method of floor resurfacing, uses 2x3-ft. blocks of a composition material ¼ in. thick. The blocks can be applied to any wood or concrete subfloor, old or new.



TWO NEW WATER HEATERS for relatively small-capacity needs were shown by A. O. Smith Corp., Kankakee, Ill. Model 718 (left) is an instantaneous heater that can deliver 403 gals. per hr. at 100° F. rise. Model B-65 (right) has a 65-gal. capacity and can deliver either 180° F. or 140° F. water at 50 gals. per hr. with 100° F. rise. Both heaters are recommended for cafeterias, washrooms, laboratories, and process use where applicable.

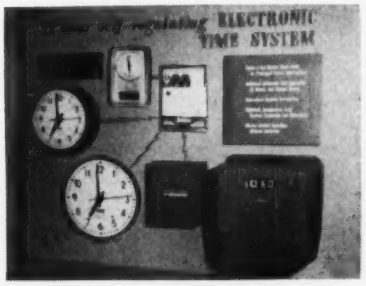
▶ Corrosion-resistant tape, actually a preformed film twice as thick as several layers of liquid coating, was shown by Polyken Industrial Tapes, 222 W. Adams St., Chicago 6, Ill. The tape is moistureproof and requires no mixing or drying time. Pipes in the ground or subject to corrosive vapors can be protected with the tape. A special textile application has been on slasher squeeze rolls to prevent electrolytic action between the roll and the size box. The tape covers the roll, and then the wool blanket is applied.

▶ A floor-drying granular material that is said to have high absorptive properties for oil, grease, water, and other liquids was shown by Eagle-Picher Sales Co., 900 American Building, Cincinnati 1, Ohio. With this product, Floor-Dry No. 85, 100 lbs. of oil can be absorbed for $4.70. The material costs $1.25 per cu. ft. but is said to be relatively more economical than any other floor-drying compound.

▶ Fuller Brush Co., Hartford, Conn., showed three new products: (1) Full-anchor wheel brushes and polishing disks made from heavy wire driven through a

For more information, write direct or use Reader Service post card.

continuous steel channel; (2) blade floor brushes that are 18-in. metal strips set with natural, synthetic, or wire bristles; and (3) a wax applicator with removable pad for heavy-duty work. Fuller also announced extension of its line to include a complete range of industrial waxes, polishes, and supplies.



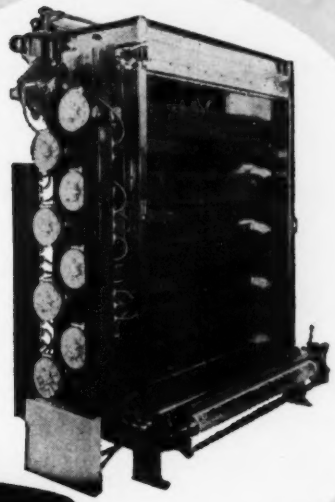
YOU'RE ALWAYS ON TIME if you use the 12-hr. self-regulating electronic time system to reset the clocks in your entire plant twice each day. The clocks are reset without manual supervision. The manufacturer, International Business Machines, 590 Madison Ave., New York 22, N. Y., claims the electronic time system will set the hour hands of clocks every 12 hrs. and regulate minute and second hands every hour. Both slow and fast corrections are made. The master control operates without batteries. When the power fails, the master control operates from reserve power.

LIGHTWEIGHT VACUUM CLEANER is for applications such as removing waste yarns from around the transferring motions of automatic looms. The cleaner is not designed for heavy cleaning duties and is easily handled in small areas where larger cleaners cannot reach. The machine, complete with 10 ft. of 1½-in. rubber-covered hose, a 1½-in. hand tool, and a 1½-in. hand-tool brush, costs $132.50, and is made by Doyle Vacuum Cleaner Co., 225 Stevens St., S.W., Grand Rapids 2, Mich.

▶ Packaged air-conditioning units with 25- to 100-ton capacity were announced by Airtemp Construction Corp., Dayton, Ohio. The units are shipped prefabricated and need only duct and utility connections to become a working system. Sizes available are 25, 40, 60, and 100 tons with refrigeration units of either the water-cooled or evaporated-condenser type.

▶ A new line of permanent-type air filters was presented by Farr Co., Box 10,187, Airport Station, Los Angeles 45, Calif. The new filters are said to hold seven times as much dirt as conventional types and to maintain high cleaning efficiency

METLKOR® BRUSHES PREFERRED



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"Most of our customers prefer METLKOR BRUSHES," states the Hermas Machine Co., well-known manufacturer of clothroom equipment, "because:

"—The cores never warp or get out of alignment . . .

"—Bristles don't fall out . . .

"—Rolls are balanced to prevent whipping.

"—All of which is conductive to long brush life and even brushing."

Hermas uses METLKORS in this new motorized brushing machine, as they have in other Hermas brushes, because of their superior performance.

The metal cores, of aluminum, cold drawn steel, stainless steel, copper, or bronze, cannot sag, split, or get out of alignment.

Bristle is wound on the cores by our patented refillable process, firmly held with flat metal wire, and sealed with special baked plastic cement.

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with low pressure drop. The filters can be used with either high- or low-velocity systems.

► An oil and grease absorbent that will not burn even when fully saturated was shown by Oil-Dri Corp. of America, 520 N. Michigan Ave., Chicago 11, Ill. The material also absorbs dyes, chemicals, acids, and the like. A companion product, a nonslip paint, puts a skidproof surface on practically any floor and is recommended for stair treads, loading docks, washrooms, catwalks, and dyehouses.

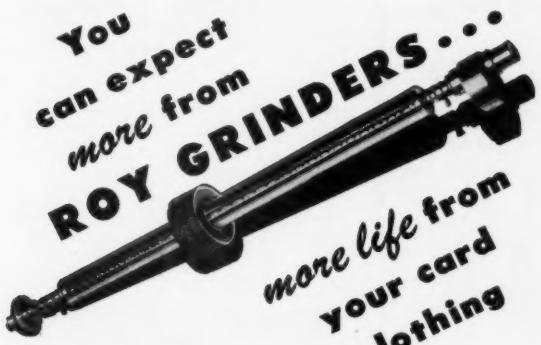
AIR IS THE POWER for this floor-polishing and scrubbing machine shown by Finnell System, Inc., 500 East St., Elkhart, Ind. The machine is operated by air pressure of 90 psi. from a ½-in. air line. For safety of motor operation, a cutout switch stops the machine when air pressures are above 90 psi. The machine weighs 110 lbs., has swiveling-type lifting wheels, is equipped with a 1¼-hp. motor, and has a solid brush 18 ins. in diameter. A sparkproof wire brush can be furnished as optional equipment.

► An explosionproof device can be added to any battery-operated Big Joe hydraulic lift. The device was developed to be used in areas of high concentration of dust particles and in chemical plants. Price of the unit with push-button control is $126. An optional remote-control switch is also available for an additional $39. The units were shown by Big Joe Mfg. Co., 900 W. Jackson Blvd., Chicago 7, Ill.

► Lightweight hoists with spur gears and all-steel construction were demonstrated by Coffing Hoist Co., Danville, Ill., to show how loads can be lifted with little manual effort. For easy handling, the one-ton model weighs only 39½ lbs. complete with coil chain. The internal shafting is sealed in a lifetime lubricant.

► Leather cutting is easy if you use a new hand jig saw with a knife blade manufactured by Black & Decker Mfg. Co., Towson 4, Md. The knife blade is interchangeable with regular-tooth wood blades and is claimed to be ideal for cutting leather in accurate dimensions for binder leathers, box-front leathers, etc. In addition, it's a handy gadget to use around shipping de-

You can expect more from ROY GRINDERS . . . more life from your card clothing



The breezing touch action—accurate side grind—the smoothest card grinding action by ROY BALL BEARING COTTON TRAVERSE GRINDER. Years of service added to new and to old grinders.

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At overhaul time, don't throw away entire rod end bearings. *Save the rod end housings* and replace only the bearings. You can do this with MONOBALL® Spherical Self-aligning Bearings and save as much as 40%. No special tools required . . . use any arbor to take out bearing, then re-stake new bearing.

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1	Stainless Steel Ball and Race	For types operating under high temperature (800-1200 degrees F.).
2	Chrome Molly Steel Ball and Race	For types operating under high radial ultimate loads (3000-893,000 lbs.).
3	Bronze Race and Chrome Molly Steel Ball	For types operating under normal loads with minimum friction requirements.

Thousands in use. Plain types in bore sizes 3/16" to 6". Rod end types in sizes 3/16" to 1½". Our engineers welcome an opportunity of prescribing a type or types which will best serve you. Special types designed to suit individual specifications.

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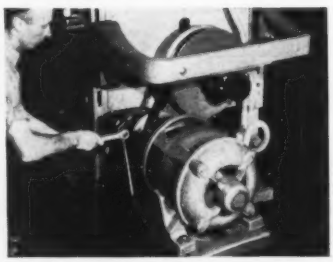

TURN OF A SCREW changes spinning speed. Speed changes are immediate and positive . . accurate to a fraction of an rpm.

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partments where paper or plywood cartons have to be trimmed. When regular blades are used, the tool cuts irregular patterns in common woods of small thicknesses.

▶A portable radial saw with two handles underneath the frame was one of the new machines shown by Delta Power Tool Div., Rockwell Mfg. Co., Pittsburgh 8, Pa. Two men can grasp the handles and easily carry the saw to any part of a plant since it weighs only 243 lbs. Then the saw is set on two saw horses, plugged into an electric outlet, and is ready to saw.

VIBRATION measurement and elimination with a special instrument, the Vibratron 652, was discussed by International Research and Development Corp., Columbus, Ohio. The system consists of a pickup, a stroboscopic lamp, and a portable box for the instrument itself. The Vibratron locates the part causing vibration, locates the point of unbalance, and allows you to determine the weight to be added or subtracted to obtain perfect balance. On motor drives, for instance, you can determine if the vibration is in the motor, pulley, or belt. Loom-mounting pads can also be checked for efficiency. The instrument, which is designed to measure rotary vibration, is being used to balance spindles and bobbins.

▶Load protection results from truck casters having springs and draw bars, claims Faultless Caster Corp., Evansville 7, Ind. Trucks can be moved without danger over irregular floor surfaces because the springs compensate for the irregularities, eliminate bounce and shock, and protect both the load and caster. The new casters with springs are for very heavy loads.

▶A new speed controller for all makes and models of electric lift trucks was shown by Yale & Towne Mfg. Co., Philadelphia, Pa. The Cam-O-Tactor, as it is called, is designed to provide smooth acceleration under all operating conditions. The extra-large, replaceable contactor tips are interchangeable and self-cleaning. A time-delay device cushions accelerator action and results in uniform contact action regardless of how fast the pedal is depressed.

▶A leveling mounting for machinery was shown by The Barry Corp., 700 Pleasant St., Watertown 72, Mass. The mounts do not require lagging or cementing. A bolt through the machine foot is screwed into the mount's center for leveling.

▶Synthetic-rubber packings with strength to withstand pressures up to 4,000 psi. were shown by Graton & Knight Co., 356 Franklin St., Worcester 4, Mass. The packings are said to have good resistance to abrasion, especially in excessively hot working areas. Other advantages of the packings are: they may be used in applica-

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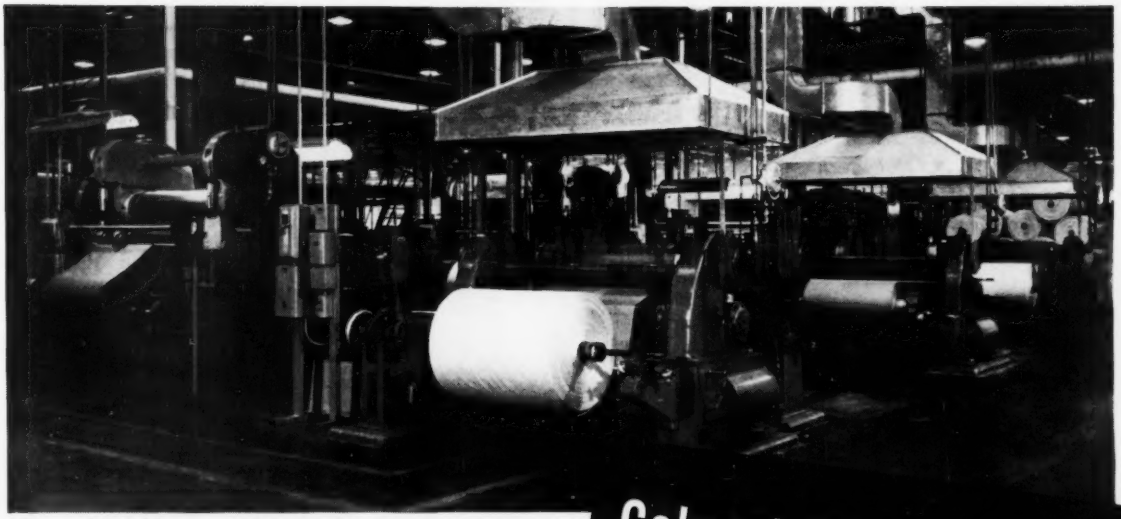
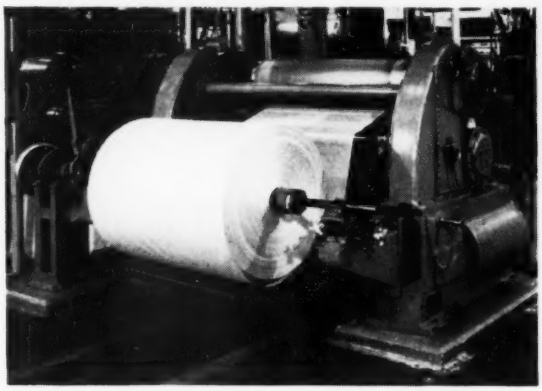
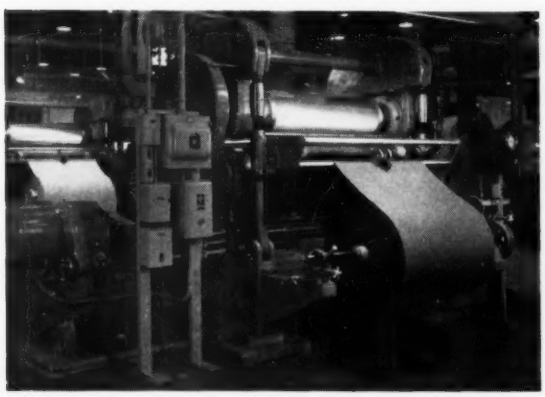


View of finishing operation at The Springs Cotton Mills, Grace Bleachery Division showing Appleton Machine Company 20 Ton Embossers and 50 Ton Schreiner Calenders.

Colonel Elliott Springs Chooses Appleton



One of three Appleton 20 Ton Embossers in use at The Springs Cotton Mills, Grace Bleachery Division.



One of three Appleton 50 Ton Schreiner Calenders specially adapted for everglaze finishes at Springs Cotton Mills, Grace Bleachery Division.

The uncommon elegance of Springmaid sheets can be attributed to Colonel Elliott Springs' shrewd judgment of textile machinery.

According to a trade journal article, the famous Springs Cotton Mills owner demands equipment that meets these requirements:

1—It must be modern.
2—It must be well made.
3—It must be the best available.

There never was a better time to invest in efficient equipment. If you would like to own the finest embossers or calenders in the industry, write or call an Appleton representative today. He will gladly analyze your needs, *without obligation.*

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CIBANONE—"a great name for the best" vat dyes—has gained new eminence with the construction of **CIBA'S** fine modern plant at Toms River, New Jersey—the largest dye plant established in the U. S. A. for a quarter century. This magnificent modern installation will follow the **CIBA** tradition by catering to the ever-increasing demand for faster dyes—vat dyes of distinguished quality worthy of their famous name.

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tions where temperatures are as low as 60° F., they show good electrical resistivity, and they resist cracking when flexed.

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4. Creel boards easily cleaned. Overhead suspension leaves open creels. Blowers more effective.
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C&K New Looms

tions where temperatures are as low as 60° F., they show good electrical resistivity, and they resist cracking when flexed.

▶ Floor marking without paint was shown by Eastman Chemical Products, Inc., Kingsport, Tenn. The markers are plastic disks with adhesive backs. You simply press them against clean floors in rows to make aisles, and they stay there. The markers come in various colors and are said to last three times longer than paint.

▶ Scaffold safety is insured if scaffold casters with brakes are used, according to Faultless Caster Corp., Evansville 7, Ind. A new foot-locking brake for scaffolding, platforms, racks, etc. was shown in 5-, 6-, and 8-in. dia. Actuated by a cam, the slot-guided brake shoe engages and securely locks the serrated swivel plate and the caster wheel. The cantilever spring action of the brake shoe compensates for wheel wear and insures full braking at all times. When the brake is released, it cannot drag.

▶ Vibration control for any type of textile machine is said to be possible with new mounting pads offered in ¼ to 1-in. thicknesses. The new types, shown by The Felters Co., 240 South St., Boston, Mass., are designed to carry calibrated loads for each square inch of density.

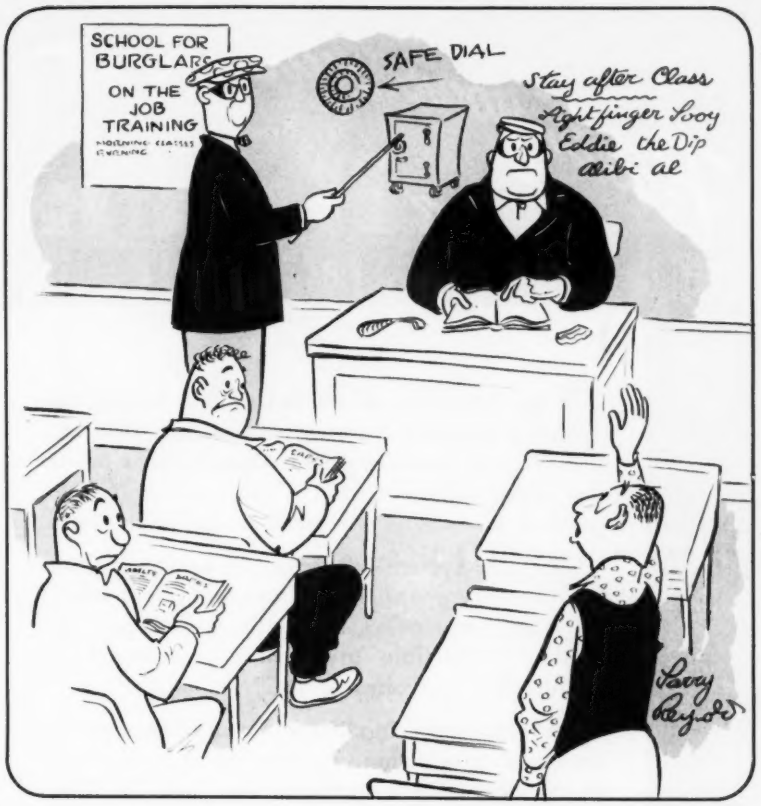
▶ A disposal unit for fluorescent lamps was shown by Laduby Co., Inc., Branford, Conn. The unit grinds the lamps under water and deposits the pieces in a bag or basket, ready for the rubbish can.

▶ Thermal expansion in piping is absorbed by a compensator shown by Flexonics Corp., Maywood, Ill. The compensator is a two-ply seamless bellows with copper-tube ends. It contains no packing and requires no maintenance. One unit can accommodate 50 ft. of steel pipe or 30 ft. of copper tubing. Pressure can be as high as 40 psi., temperature to 250° F.

▶ Vibration control with a pad that combines the properties of cork and rubber was presented by Korfund Co., Inc., 48-15 32nd Place, Long Island City 1, N. Y. Elasto-Rib, as it is called, has a cork center with grooved neoprene on top and bottom. Grooves on the top side are perpendicular to those on the bottom side to prevent creeping. The material can take about 50 lbs. per sq. in. of load.

▶ Some toilet troubles are said to be minimized with a new product that prevents rust buildup. Magnesium-alloy beads on conductive metal wire are grounded to the water-inlet pipe in the toilet tank. The alloy, developed to clean silverware electrolytically, is called Magic Maid and was shown by Vince B. Nyhan Co., 1801 S. Jefferson St., Chicago 16, Ill.

▶ An attachment that allows rough, uneven surfaces to be cleaned with its wall-cleaning machine was shown by Quaker Maintenance Co., Inc., 124 W. 18th St., New York, N. Y. Controlled-moisture cleaning can now be applied to corrugated-metal ceilings, pipe risers, molding, painted rough brick, tile, and marble.



"But how do you get over a Cyclone Fence?"

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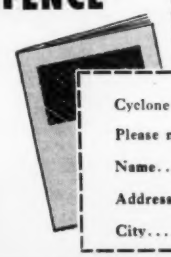

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C&K New Looms

CONTINUED FROM PAGE 108

The magazine on this loom is a two-color rotary magazine. The loom is equipped with a color-indicating mechanism to indicate the box motion and magazine control.

The bobbin disk is stenciled Nos. 1 and 2 alternately so that the filling in the magazine can be replenished without mixing it. A two-prong electric feeler is located under the magazine to indicate filling changes.

A 17⅜-in. shuttle is used for 8¾-in. metal-ferrule bobbins. The harness motion is the undercam type with space for four harnesses. This loom can also be changed to a single-shuttle loom.

For further information about the above loom circle T-2 on Reader-Service Card

Multipurpose Loom No. 3 is a 60-in. geared 4 x 1-box-motion loom running a four-color filament-acetate plaid.

A four-color rotary magazine having the numbers one through four stenciled on the bobbin disk is used to transfer all filling automatically. A two-prong electric feeler is used.

The shuttle length is 16⅜ ins. for an 8-in. metal-ferrule bobbin.

The loom is equipped with a 18-in. gauge 20-harness dobby and a multiplier for both call-box and magazine indication.

For further information about the above loom circle T-3 on Reader-Service Card

Loom No. 4 is also a multipurpose 4x1 loom and will be running a staple-acetate plaid flannel. The 78-in. loom has the same type four-color rotary magazine used on the loom running filament-acetate cloth. This loom has a box-motion chain to indicate box-motion changes and color-motion changes for the magazine.

The bobbin length is 8¾ ins., and the shuttle length is 17½ ins.

A 25-harness 4/10-in. space drop-box head is used on the loom.

For further information about the above loom circle T-4 on Reader-Service Card

The fifth loom in the series is a 72-in. loom with a two-color rotary magazine weaving a blended warp of cotton and staple rayon with rayon novelty filling.

A 20-harness 15/32-in.-gauge dobby is used.

A 17½-in. shuttle runs a 8¾-in. bobbin.

This loom is also convertible to a single-shuttle loom.

For further information about the above loom circle T-5 on Reader-Service Card

Another C&K loom that is not one

Draper's New Looms

of the multipurpose series is the new W-3A Select-A-Pic 82-in. loom running a worsted blend of sharkskin glen plaid.

This loom will weave automatically many pick-and-pick styles formerly woven with the filling hand changed.

The Select-A-Pic loom is a 4x2 loom. Four shuttle-box cells are on the head end of the loom and two are on the drive end. When filling is being changed by the magazine, the bobbin to be changed must be in a shuttle in the top cell of the drive-end shuttle box, and there must not be a shuttle in the bottom cell of this shuttle box at the time of transfer.

As a result of this special shuttle arrangement during the transfer period on special patterns of cloth, there may be a slight loss in production. The loom is equipped with sliding picking motions so the shuttles can be picked from either end of the loom.

A light-touch electro-mechanical filling feeler is controlled by a switching arrangement in the head motion so that it indicates only during a transfer sequence. Color-control indication for the cells of the four-color stationary magazine also comes from the head motion.

The loom is equipped with a 25-harness 4/10-in. space Knowles head motion. The loom drive is the standard W-3 drive.

The let-off is the full-automatic let-off in the high position and takes a 30-in.-dia. beam head.

For further information about the above loom circle T-6 on Reader-Service Card

The seventh loom is a narrow-fabric loom weaving zipper tape. The loom has a 44-space double-deck batten and uses straight shuttles on 5-in. centers. The lay is constructed of magnesium for light weight and higher speeds.

This loom will be shown with an eight-harness end cam and a 20-harness dobby; the loom weaving tape will show the use of a four-cam harness. A friction let-off is used.

The loom drive is the silent-type drive with a single belt. A push-button jog-start-stop control is located at the front of the loom for ease of operation by the weaver.

For further information about the above loom circle T-7 on Reader-Service Card

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TEXTILE DIVISION

Draper's New Looms

CONTINUED FROM PAGE 111

The sixth loom is a third X-2 loom, featuring antifriction bearings. The loom will not have a warp and will be operated slowly (40 ppm) so that special features can be inspected closely.

The loom has 83 antifriction bearings. Antifriction bearings are furnished on the crankshaft, front crank arms, camshaft, rocker shaft, loom beams, throughout the whiproll parts, auxiliary-shaft bearings, idle gears, take-up-roll bearings, protector rod, picking balls, let-off, take-up, harness sheaves, and harness-roll studs.

Where it isn't practical to use antifriction bearings, oilless bushings are used. There isn't an oil hole on the loom. All lubrication is by grease or by oilless bushings.

A Draper No. 92-P take-up is used. The driving gears are enclosed in an oil bath. This take-up eliminates the conventional wind-up parts and the gear train. The take-up roll is metallized and is adjustable to permit the application of a nutting bar with the addition of only four basic parts.

The cloth roll is metallized and is gear-driven on fixed centers. Cloth is doffed quickly without stopping the loom.

For further information about the above loom circle T-20 on Reader-Service Card

Loom No. 7 is a 50-in. XD-model filling-mixing loom weaving a fabric from dope-dyed acetate yarn at 162 ppm.

The loom has a cam-driven box motion for 2x1 shuttle-box weaving. It is provided with a center-fork stop motion, 1-hp. Draper-Diehl power transmitter, and a 20-harness dobby.

Antifriction bearings are placed on the rocker shaft, all whiproll parts, and loom beam. A 15¾-in. shuttle takes a 7⅞-in. bobbin.

A new-type underslung temple with close-cutting thread cutter is used. This temple is mounted on a rod at the back of the take-up roll. The temple provides for easy adjustment without touching the cloth. Since there are no parts near the cloth to be oiled, soiled cloth from temple stains is eliminated.

The same type of one-piece pick cam and toe used on the 46-in. X-2 loom weaving sports denim is used on this XD loom.

The outstanding feature of this loom is the new pivoting-binder construction. Eccentric bushings similar to those used in the binder of the battery end of regular XD looms are used in the binders on the drop-box end of

because most of the doubling has

the loom. Results are easy and quick adjustments by the loomfixer. Binder-spring tension is fixed, and all adjustments are made by turning the eccentric bushings.

For further information about the above loom circle T-21 on Reader-Service Card

Tips on Blending Fibers

CONTINUED FROM PAGE 88

14,000-lb. run of a 50-50 mix has used 7,000 lbs. of each component.

Variations in moisture content of the bales fed into the blend do cause some change in the composition of the final yarn, but the effect is much smaller than has been supposed.

Fig. 5 is a nomograph that illustrates the effect of moisture on a viscose-acetate blend weighed in at 50-50. The base line represents viscose at 12% and acetate at 6% moisture content to give 48.6% viscose on a bone-dry basis. Even if the acetate is as dry as 2% and the viscose is as wet as 16%, the composition of the blend changes only from 48.6% viscose to 46.5% viscose. At the other extreme, if the acetate is as wet as 10% and the viscose as dry as 8%, the blend changes only to 50.5% viscose from 48.6%.

Normal, small variations in moisture content, therefore, are not likely to cause substantial variation in blend composition. This statement is particularly applicable when the blend is made up from a large number of bales and when the number of doublings is not very low.

Bunching of fibers can occur if the bulk densities, cohesions, or sizes of the component fibers in the blend differ greatly. Bunching often happens in bins or hoppers and can usually be stopped by deflector plates and properly adjusted lattice speeds and comb settings.

Check Quality at Three Points

Quality-control techniques can be applied at three points in the spinning of blended yarns:

1. Blending
2. Finisher drawing
3. Yarn

In the blending room, quality-control-chart techniques can be used to check the weighing mechanism of the blending feeder. It is also advisable to check the weights of fiber actually used. Moisture content of individual bales need not be checked, but wet bales should be set aside for investigation and should not be used.

Finisher drawing offers a good opportunity to check blend composition

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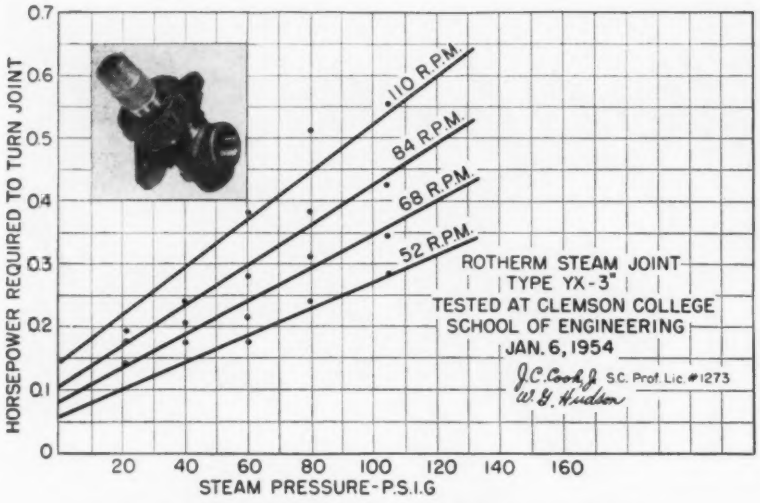

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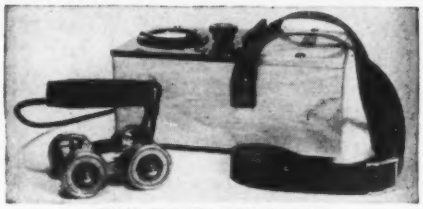

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because most of the doubling has taken place but corrective action can still be taken. A constant length of sliver should be analyzed by chemically dissolving the components. Some variability from the random distribution of fibers can be expected, but there is usually no drift in blend composition as long as the chart shows evidence of control.

Quantitative measures of dope-dyed fibers are difficult, but color matching of finisher-drawing sliver by eye under a good natural or classing light is very useful.

Yarn should be checked by knitting samples in adjacent bands on a circular knitting machine or by weaving the yarn as filling in a filling-face weave. Fibers that dye differently can be differentially dyed, and blend composition can be checked under a suitable light. Changes in composition of dope-dyed fibers can be immediately seen without dyeing.

Running 44HH Bemberg Yarns

CONTINUED FROM PAGE 83

twice as many tension weights at the creel as we use on other yarns. The double weights result in approximately the same tensiometer reading on individual ends as those of other yarns with normal weights.

The tension at the creel is 12 to 15 gms. on all Bemberg yarns of 75/45, 5 tpi. up to 150/90, 3¼ tpi.

Again, these Bemberg yarns tend to slide through the tensioning devices just as they do in winding.

The tension on the ends between the warper whiproll and the section beam is 18 to 20 gms.

We do not use eye boards or excess rollers so that the ends touch as few surfaces as possible.

The speed of the Sipp-Eastwood warpers and creels is 350 yds. per min.

Run up to 2,500 Lbs. Pressure On the Slasher Quetsch Rolls

Tension on the yarn during slashing must be watched more closely than in previous operations because uneven tension here can cancel all the benefits from careful yarn handling up to this point.

We use a tremendous amount of pressure—2,250 to 2,500 psi.-ga.—at the quetsch. If three rolls are not used with this pressure, the two rolls will bow in the center; and the center of the warps will not be properly sized.

The high pressures we use result in yarns properly penetrated and coated with size.

All the heated cylinders on our

slashers are covered with cloth. The surface heat of the cylinders from front to back is: No. 1 cold, No. 2 cold, No. 3 170° F., No. 4 180° F., No. 5 210° F., No. 6 220° F., and No. 7 220° F.

When cylinders are run uncovered, the surface heat of any cylinder must be below 190° F.

When slashers are stopped or run at low speeds, we turn the heat off because excessive heat is harmful to Bemberg yarns.

Use This Sizing Formula For Good Results in Weaving

It is also necessary to take leases and doff loom beams as quickly as possible.

Keep the slashers jogging when broken ends are being retied.

We keep the tension on the section beams at the slasher as low as possible and pull the beams against live weights. All bearings for the beam arbors are the self-aligning ball-bearing type.

Normal pressure—70-gm. density—is used on the loom-beam yarns.

The stretch is held to 1% on Type 44HH yarns and 4 to 5% on other Bemberg yarns.

Beams are doffed with 4 to 5% moisture content.

A split rod is used between the back cylinder and the size box to form a 50-50 lease.

Our slashers (Johnson and Cocker) are run at 30 to 35 yds. per min. on a 6,000-end, 75- to 150-den. warped set.

Here is the size mix that works best for us on a 6,000-end warp of 75 den.:

42½ lbs. of 51.05 Elvonol
4 lbs. Nopco 11-11 oil
1½ oz. Dowicide
100 gals. water

To mix, draw 75 gals. of cold water in the mixing kettle and add the Elvonol, stir the two ingredients for 20 mins. cold, heat slowly to 220° F., hold at this temperature for 20 mins., and add enough water to bring the mixture to 100-gal. capacity.

Heat the size to 165° F. and add the oil and Dowicide.

Keep the mixture agitated slowly at 130° F. in the storage kettle.

Use the size in the size box at 100 to 110° F. This temperature results from normal cooling between the storage kettle and the size box.

We have also used glue and oil sizing formulas with good results.

Set Warp Tension With a Checklist

Warp and filling tension at the loom is the only difference we make between weaving Bemberg fabrics and other filament-rayon fabrics. But

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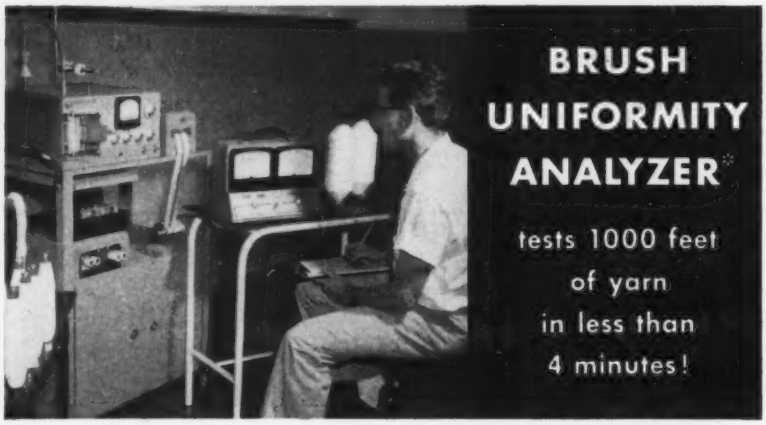

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tension controls in weaving have proved so successful that we plan to use them on all fabrics.

Warp tension is checked every 24 hrs. on fabrics having the average number of picks per inch (50 to 80). The tension is checked every 8 hrs. on materials with fewer picks per inch.

Crompton & Knowles tension meters are used to check the warp tension. Loomfixers and smash hands use the instruments.

Each warp has a certain number of ends tied with a braided twine just back of the drop wires. The ends are placed through the jaws of the tension meter, and the warp tension is loosened or tightened to obtain the desired reading.

The number of ends to be placed in the tension meter on different deniers of yarns are:

Denier	Number of ends
45	158
55	129
75	95
100	71
120	59
150	47
200	36
220	32
250	29
300	24
350	20
450	16

Each style of cloth on each denier of yarn has a standard tension setting for the number of ends in the braided twine, and tension on all looms weaving that style is set to that standard with the tensiometers.

Filling Tension Is Checked At Least Once Each Week

Filling tension is checked in every shuttle in every loom at least once each week. A girl on the first shift and another on the third shift use a Tension-Rite instrument to check and adjust the filling tension.

Shuttle care is of particular importance in weaving Bemberg yarns. All surfaces must be smooth, the grips must be tight and aligned properly to keep the bobbin aligned to the eye, and the eyes and fur must be in good condition.

We weave Bemberg yarns on all our six types of looms. They are: C&K S-6, S-5, and S-3, and Draper XD dobby, XK dobby, and XK cam.

Production efficiency in weaving averages 95%. Seconds stay below 5%. Production on a group of 44-in. XK cam looms running at 160 ppm. has averaged 93% since June; production has not been lower than 92%

be the same. The higher the false twist, the greater the improvement in even-

or more than 94% on this group of looms during the period.

The number of looms per weaver on the XK cam looms is 58. Loomfixers have 72 looms.

On C&K S-6 looms, weavers operate 36 looms and loomfixers maintain 48 looms.

Standard loom settings are developed on each type of loom for each style of cloth, and all looms on each style are set by a checklist at each warp-cut. The second hands of weaving and the superintendent of weaving all keep a checklist of each style of cloth and also a record of each loom set by the checklist.

A typical checklist for a style woven on S-6 looms is:

Style	2228-1
Reed No.	40
Ppi.	70
Warp tension	50 to 60 gms.
Filling tension	7 to 8 gms.
Shuttle fur	Heavy
Temple rolls	Crepe cork
Harness timing	3/16 to 1/4 in. past front center
Shed opening	3/16 to 1/4 in. over back wall of shuttle
Whiproll setting	Level with breastbeam
Drop-wire stand setting	15 1/2 ins. from back harness
Reed vibration	1/8 in.

Most loom settings and timings are standard ones used on all types of filament-rayon yarns.

For instance, on S-6 looms a few of the common settings are:

Front center position of lay	5 3/16 ins.
Start of picking	8 ins.
Finish of picking	10 ins.
Box-motion drive gear	9 ins.
Center stop motion	9 1/4 ins.
Lifter pawl	5 3/4 ins.

On XK cam looms, the picking motion starts at 7 1/2 ins.; and the pickerstick stroke is 7 3/4 ins.

Rubber-Topped Flyers

CONTINUED FROM PAGE 81

twist is usually high and the weak places are not whipped so badly as are those in heavy roving. There should be some gain, however, particularly with regard to stop motions.

You can demonstrate the twist to yourself by running colored roving along with the sliver on spindles side by side, one with the rubber-topped flyer. The strand with the rubber top will have many times more twist, but twist on the package will

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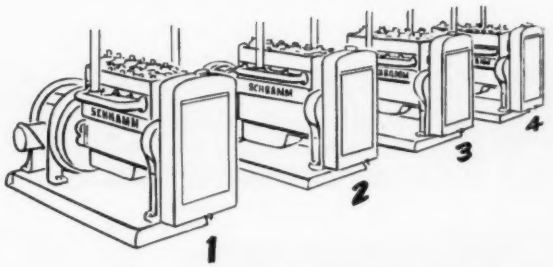

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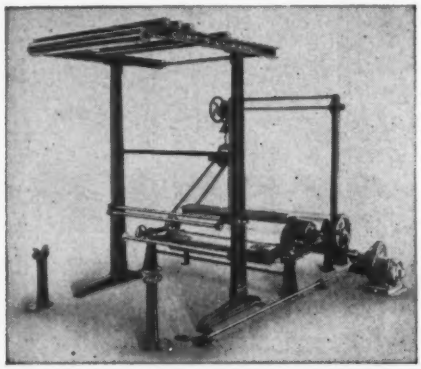

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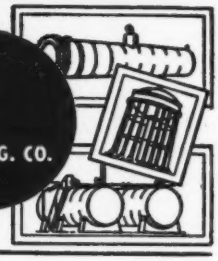

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be the same. The higher the false twist, the greater the improvement in evenness.

[In the discussion that followed Dr. Brown's talk, two large mills reported experience with the Clemson Pretwister. A Georgia mill is getting 900% more twist in the false-twist section on 0.50- and 1.0-hk. roving. Roving unevenness has been reduced 25%, and yarn unevenness is 15% less. A North Carolina mill experimenting with the device reported that Belger-tester results showed that more-uniformly-draftable roving is produced.—Editor.]

Picker-Lap Variation

CONTINUED FROM PAGE 79

hr. with two blending feeders, each feeder must deliver 150 lbs. per hr. at 100% production. These feeders should run 85 to 90% of the time (better if possible), and should be fed on a patrol cycle so that the hoppers do not run heavy and lean.

Having the doffer set away from the lifting apron to increase production allows large, dense pieces of cotton to pass on to the feed apron when the hopper is full. When the hopper is nearly empty, finer and less-dense pieces are passed to the apron. A closer doffer setting helps to minimize the effect of operator attentiveness when a relatively constant hopper level cannot be assured.

The defects noted above are not ordinarily remedied on the picker. The blending reserve does not distinguish densities; and the evener motion, since it measures thickness, cannot completely compensate for variations in density. Evener motions are designed to measure differences in thickness of material of the same density.

Another cause of total-lap-weight variation is adjustment of the evener motion from lap to lap. Such an adjustment actually results in more rejected laps.

Reworkable waste is often another cause for this long-term variation. Such waste must be accurately controlled and blended to minimize variations in total lap weight.

Yard-to-Yard Variation

Poor condition or improper sensitivity adjustment of the evener motion is a cause of yard-to-yard variation. On pickers with a blending reserve, variation is caused by improper setting of the rake for level control and by high- and low-speed feed to the blending reserve. On pickers without a blending reserve, improper feed to the picker itself causes variation.

Although there have been some important improvements, the evener motion is still basically a crude mechanism. Everything connected with the evener motion must be in excellent condition if it is to perform its function. The measuring shoes should be kept clean and free on their fulcrums, and the cone belt should be kept at the proper tension and clean to avoid slippage.

The sensitivity of the evener motion (the relation between variation in the thickness fed under the shoes to the

card and ability to be handled with rea-

speed change of the evener roll) must be correct. This adjustment must be made by trial and error on each picker by changing the length of the fulcrum arm that actuates the belt-shifting mechanism.

The effects of total-lap-weight variation and yard-to-yard variation on the yarn are somewhat similar. If the lap is 2 lbs. heavy and if these 32 oz. are distributed equally over the 56 yds. of the lap, each yard will be 3/5 oz. heavy. With a total draft of 864,000 from carding through spinning, the 56 yds. of heavy lap will be drafted to about 53-million yds. of yarn. If the yarn is 20s and if the spinning bobbin holds 4 oz., the heavy lap will be a portion of 11,520 bobbins.

One heavy yard of picker lap will be a portion of only 206 bobbins, but it is obvious that either total-lap-weight variation or yard-to-yard variation is extremely long term at the yarn stage and no daily checks for yarn number or cloth weight correspond to it.

Within-Yard Variation

In our early work on the picker we found that, after intensive work, we could produce a lap with good yard-to-yard and total-lap-weight variations. But we found a wide disparity in weight-per-yard variation of card sliver made on the same card from laps from different pickers. We decided that within-yard variation might be the cause.

Since ⅛ in. of picker lap makes about 1 yd. of sliver on a card with a draft of 100 to 120, fractional-inch variation in the lap is important. The recent development of several lap meters for measuring this short-term variation attests to the importance of the problem.

Lateral variation in picker laps, however, has received very little attention. A lap with heavy and light sections across the width feeds the card irregularly and actually results in varying card production across the width of the cylinder. The section of the cylinder that receives a heavy streak of lap has more fibers per square inch than an area being fed a thin streak. Since there is practically no shifting of fibers across the cylinder in carding, the heavy and light streaks are still present in the web. Forming this web into the sliver does not level out this effect because the important thing is that these strips contain fibers of varying degrees of openness and separation. Such a sliver helps to create irregularities in subsequent drafting zones.

The main causes of lateral variation in the lap are: lack of control of air currents in the finisher section; lateral variation in the batt fed to the finisher beater; and improper balance between the volume of air, amount of stock on the screens, and open area of the screens. Picker cleanliness (freedom from chokes) is also important.

The Construction Factor

The fifth quality feature is a relatively intangible item representing a combination of degree of fiber openness, cleanliness of the stock, and the way the fibers are formed on the screen section.

To produce good card sliver, a lap must be as light and fluffy as possible. The two limiting factors are ability to split on the

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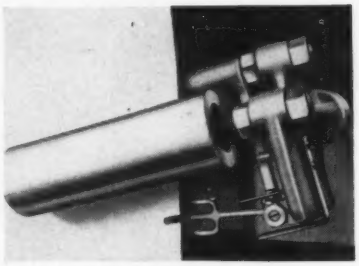

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card and ability to be handled with reasonable care without creating an excessive amount of waste.

A "nubby" lap, one that has small bunches of tangled fibers, is not the best type of lap to present to a card. These bunches are caused by improper opening in the picker and by turbulence in the finisher section. These bunches and lateral variation in the lap are a principal cause of plucking on the card.

The Tritex Modification

Our solution to these problems of lap variation consists of three modifications aimed at the reduction of within-yard variation and one modification designed to reduce lateral variation.

To overcome the considerable turbulence between the Kirschner beater and the screen section, we have designed and built a solid, cylindrical-type beater with a carefully determined combination of pins and setting.

Every mill man has seen foreign matter knocked through the grid bars and then sucked back up by the air current. This condition did not seem logical to us, so we installed a separate air-intake tunnel in front of the grid-bar section. The tunnel extends 12 ins. below the grid bar and has a baffle plate from the back of the tunnel down to the floor to seal off the air intake from the waste section.

To move the stock to the screens very quickly and to minimize "hunting" or shifting of the cotton as it hits the screen, we redesigned the entire section from the beater to the screen section. There is a constriction in the channel between the beater and screen section to speed movement. (Exhaust conditions also play an important part in controlling these air currents.)

To reduce lateral variation, the air-intake tunnel is divided into 10 compartments across the width of the picker. Each compartment has its own gate by which air can be controlled and cotton can be shifted at will on the screens to make a lap that is uniform from selvage to selvage.

New Fiber Feeder

CONTINUED FROM PAGE 78

way, uniform distribution of fiber is obtained at the screen.

The screen is controlled from the subsequent machine, the Rando-Webber, and can start and stop independently of the spiked apron. When the screen stops and the apron continues to run, fiber accumulates in the air bridge until it is full; then the fiber tufts are not removed from the apron but re-enter the hopper with the apron.

While the feeder was developed specifically for use with the webber in making nonwoven fabrics, it might be useful in cotton-type blending lines for sandwich blending of cotton or other fibers by volume.

Tests for uniformity show that opened and unopened cotton run through the feeder is delivered in mat form with a standard deviation lengthwise of 3.5% and widthwise of less than 3%.

Mill No. 2 running on Tritex stock.

New Continuous Stripper

CONTINUED FROM PAGE 80

set in four places around the rotor, and there are four pins in each set. The wire now used is flexible piano wire that is about twice the diameter of the cylinder wire.

The pins on the stripper are set to reach about 1/32-in. below the knee of the card wire, or about 3/32 in. total mesh into the card wire.

The stripper rotates in the opposite direction to the cylinder, and the pins have a slight bend at the end to assist in cleaning out the cylinder.

An eccentric action retracts the pins and returns them to position with a positive motion.

No flats have to be removed to install the stripper. The slot is cut in the back plate, and two steel strips are put on to guide the stripper and reinforce the back plate.

The stripper makes five complete traverses of the cylinder every hour.

Card Waste Down 1%

Several 4-hr. tests, a 30-hr. test, and a 60-hr. test show that the stripper reduced card waste 1%. The potential savings on a mill run, if results are similar, are definitely interesting.

In the 30-hr. test, the weight of sliver produced ranged from 52.9 to 57.6 grains and averaged 55.7 grs. for a mechanically harvested rain-grown Mississippi Delta cotton. In the 60-hr. test, the sliver weight for an irrigated, weather-damaged, mechanically harvested cotton with high grass content ranged from 51.2 to 57.0 grs. and averaged 55.0 grs. The card was set to produce 55-gr. sliver, and the variation noted above can be compared favorably with that obtained when the card is hand stripped at 3- to 4-hr. intervals.

Neps per grain in the web for the 30-hr. test ranged from 7.4 to 12.0 with an average of 10.3. For the 60-hr. test, neps ranged from 22.0 to 33.7 with an average of 28.7 neps per grain.

There was no difference in strength, uniformity, and appearance of the 36s yarn made from cotton with and without the stripper in 4-hr. tests.

Improved models of the Retracto-Pin stripper will soon be placed in several mills to be tested under production conditions.

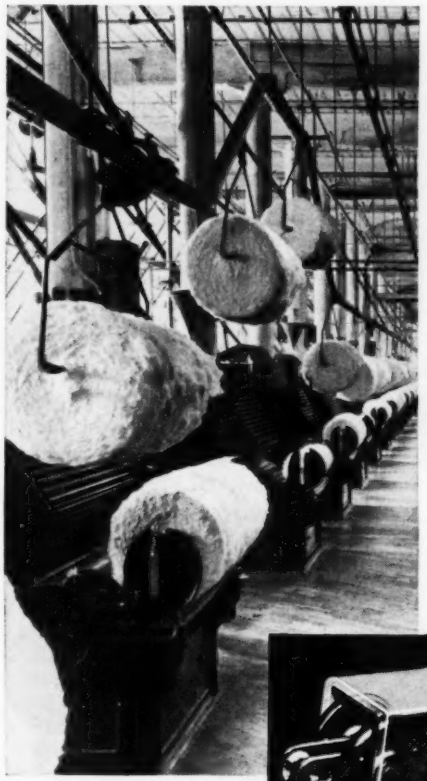
Joanna's Experience With Tritex Modification

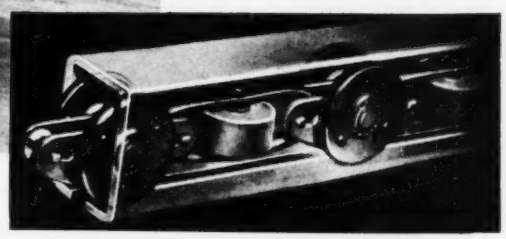
CONTINUED FROM PAGE 79

that Tritex had marked superiority because of its very nature. Everything pointed to improved quality, but we had to have more positive proof.

Full-Scale Test Settled It

To settle the problem, we decided to channel all Tritex laps to our Spinning Mill No. 2, which had always shown a lower breaking strength than Mill No. 1. We made enough regular laps to cover Mill No. 1 for several months, then changed over two more pickers to keep





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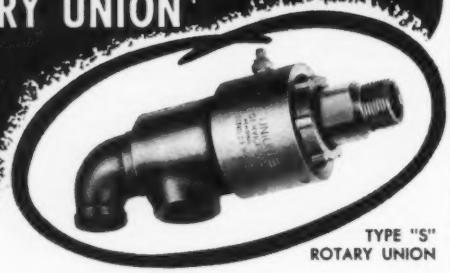

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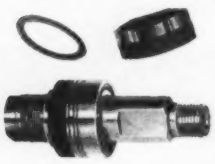

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Mill No. 2 running on Tritex stock.

The dramatic reversal in position of these two spinning rooms is shown on the accompanying graph. Mill No. 1 led the way for the 22 weeks before the test but was never ahead of Mill No. 2 during the 18 weeks of the test. By that time we decided to go Tritex 100%; so the test was discontinued.

Later, as both spinning rooms got Tritex stock, Mill No. 1 again came to the fore. (The refrigerated air-conditioning system in this mill is credited with the difference.)

The Tritex modification now helps us to make really good picker laps. A very rigid maintenance schedule also helps us to keep the improvement we have attained.

The picker needs a great deal of constant attention. We maintain a check-sheet program by which the fixer checks so many items each shift. The assistant overseer checks, and the general overseer spot checks.

Under present-day "no-doubling" operations, the mill runs almost directly from the picker room. No pains should be spared to make a lap as perfect as possible.

Reversing Card Flats

CONTINUED FROM PAGE 80

when the flats are loaded.

How the Tests Were Run

We reversed the direction of our flats by uncrossing the belt that drives them, and we used different pulleys to change flat speed. One-hour runs were made by stripping the flats manually at the back. We thoroughly stripped and cleaned the card and ran it until the flats moved more than the distance from front to back. Nep count was taken each time by the same operator, and the following items were weighed: cotton fed, flat strips, cylinder strips, fly waste, lickerin waste, and sliver delivered. The sliver was tested on the Shirley Analyzer.

All our tests were run on one Woonsocket card running with normal speeds and settings.

The cotton used was not the same, however, and this fact may have some bearing on our results. Both rain-grown and irrigated cotton was used, and staple length was 1 1/16 and 1 3/32 ins. respectively.

Eight Definite Trends

1. Reversing the flats reduces neps at low rates of production.
2. Decreasing flat speed reduces neps no matter which direction is used.
3. Foreign matter in the web increases with lower flat speeds in either direction, but the increase is not great at flat speeds of 1 to 2 ins. per min.
4. Flat strips increase rapidly as flat speed increases in either direction.
5. Flat strips are less than normal if direction is reversed and speed lowered.
6. Cylinder strips are reduced considerably when flats are reversed.
7. Total card waste is lower at reduced flat speeds in either direction.
8. Increasing card production decreases

the nep advantage gained by reversing the flats.

In view of the above trends (and assuming that they will be the same under mill conditions), we believe that both reversing and reducing motion of the flats is advisable for quality goods carded at speeds less than 10 to 12 lbs. per hr.

The small increase in foreign matter left in the web is more than offset by the reduction in neps, flat strips, cylinder strips, and total waste. We believe that the additional foreign matter is mostly removed in later proceses anyway. In the gray, yarn spun from this sliver shows no significant difference in strength, evenness, or appearance. However, yarn dyed in deep shades shows the same nep reduction found at the card web.

Since all the work so far has been done with one arrangement of speeds and settings, it seems unlikely that the very best arrangement would have existed on this one card. We hope that reversing the motion of the flats will be more clearly proved desirable when other speeds and settings are changed.

Solving Stripping Problems

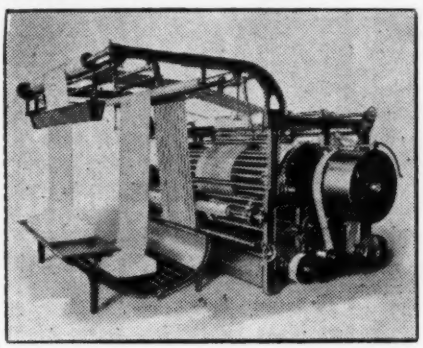
Of course there is more to this idea than uncrossing the belt driving the flats. There is a stripping problem. Here are two solutions developed at Clemson.

One solution is to give the present stripper comb a larger stroke by enlarging the usual operating cam. At the bottom of the stroke, the flat strip is carried past the blade and caught between the blade and the scavenger roll. The scavenger roll is positively driven by a ratchet and pawl.

One disadvantage of this method is that the top of the card is white, and plans are now under way to develop a scavenger roll that operates at the rear of the card before the flats go over the top.

The second solution is to strip at the rear of the card and drop the strips on the lap. This solution is fine for synthetic staple and for cotton where there is no objection to some additional neps. One way to accomplish this stripping is to pivot a stripper comb above the lickerin to rock back and forth past the flats and the scavenger comb. Strips are pushed off the comb and fall back on the entering lap in a sheet.

"Sooner or later you're going to have to get another box."



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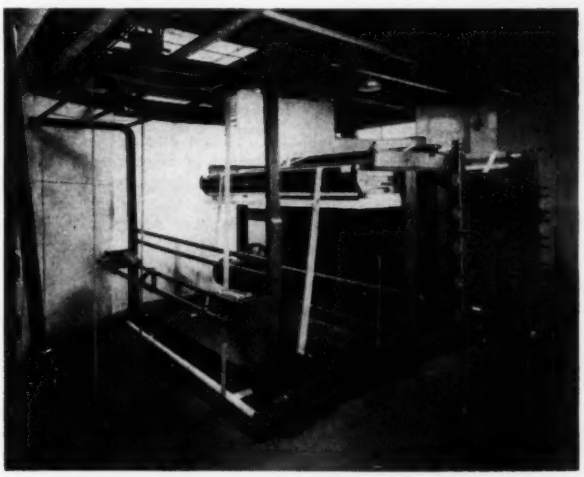

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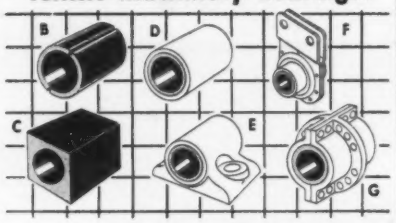

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A new line of chain couplings has been added by Browning Mfg. Co., Maysville, Ky., to take its split-taper compression bushing. Couplings are available in a wide bore selection in capacities up to 150 hp. (U-2)

High-Speed Counter

An electronic counter that will count revolutions, strokes, electrical signals or similar impulses from 0 to 5,000 counts per second has been marketed by Atomic Instrument Co., 84 Massachusetts Ave., Cambridge 39, Mass. It will record up to 10-billion units. (U-3)

Solenoid Valves

Cast-iron and -steel solenoid valves, sizes ¼ to 2 ins., are available from Atkomatic Valve Co., Dept. 282, 545 Abbott St., Indianapolis 25, Ind. Pressures: 1,000 psi. at 200° F; 500 psi. at 450° F. Features: stainless-steel seat screw, Teflon disks, removable inserts, and neoprene O rings. (U-4)

B-Groove V-Belts

A new line of two-, three-, and four-groove V-belt sheaves has been added by Browning Mfg. Co., Maysville, Ky. Ranging from 7.0 to 18.4 ins. in pitch diameter, the B-groove belts have a bushing-bore range of ½ to 1¾ ins. (U-5)

Lubricant for Light-Bulb Sockets

A chemical that keeps aluminum-base electric bulbs from sticking in their sockets has been developed by Acheson Colloids Co., Acheson Industries, Inc., Port Huron, Mich. Called Aquadag, the dispersion of colloidal graphite reduces friction, corrosion, and galling. (U-6)

Call MILTON for dependable BEAMS

Light Metal construction featuring continuous welded

NYLON & RUBBER YARN BEAMS

FORGED HEADS
RIGID BARRELS

Forged heat-treated aluminum alloy heads and extra heavy wall barrels designed to withstand extreme pressures of monofilament; fine denier; low-turn nylon; and rubber yarns. 13¾" and 21" diameter heads.

SECTION BEAMS

Adaptable to all makes of warpers. Cast aluminum alloy heads and extruded aluminum barrels cannot shrink, swell, splinter or distort.

STEEL BARREL
WARP BEAMS
for BROAD, NARROW FABRIC, RIBBON, VELVET AND CARPET LOOMS

BROADLOOM BEAMS

for C & K and Draper Looms

Shown above is Milton's stud construction (also made with cast iron hubs).

RIBBON LOOM BEAMS

Adjustable head with fixed shaft, or fixed head with removable shaft.

SEE THEM AT THE SHOW

MILTON MACHINE WORKS
INCORPORATED
DESIGNERS • ENGINEERS • MANUFACTURERS
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Reader Service

MILL EXECUTIVES may obtain free for the asking . . .

. . . OUTSTANDING TRADE LITERATURE reviewed on the next and following pages

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New Dyes & Chemicals
New Useful Accessories
Editorial Articles
and the Advertisements

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. . . to get more information on anything published in the editorial or advertising pages of this issue. If your inquiry concerns equipment or supplies, name the specific equipment or supplies involved. If your inquiry concerns anything other than equipment or supplies, you must state specifically the information you want.

. . . to send a Kink, a letter for Round Table, or a news note.

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. . . to request copies of trade literature described on the next and following pages or to get more information on New Textile Equipment, New Dyes & Chemicals, and New Useful Accessories described in this issue.

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TEXTILE WORLD, A McGraw-Hill Publication, New York 36, N. Y. APRIL, 1954

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Reader Service (Continued)

NEW!

Outstanding TRADE LITERATURE *Free for the Asking*

NO REPEATS . . . Listed here for April are current bulletins reviewed by the editors of TEXTILE WORLD. To get the ones you need, circle the number on the Reader-Service card, as described on the preceding page.

TEXTILE MACHINERY

Tufting machines are described in a brochure from Cobble Brothers Machinery Co., Inc. Bedspread machines, throw-rug machines, broad-loom carpet machines, and carpet machines with pattern attachments are illustrated and described. **(F-1)**

Duo-Both Drafting is described in a bulletin from Saco-Lowell Shops. The new drafting system gives 50% draft increase, higher yarn strength and evenness, less cleaning, and more flexibility, and replaces the middle top roll and control roll used in the single-belt Roth system. **(F-2)**

A No. 15 Opener is described in a bulletin from Saco-Lowell Shops. The opener consists of a new Buckley type beater, 16 ins. in diameter, with 136 hardened steel picks so arranged that all parts of the sheet come in contact with the picks. The beater assembly is surrounded by 46 grid bars. **(F-3)**

A sizing machine is described in a catalog from Charles B. Johnson Machine Works. The machine features an automatic quetsch loading device and five quetsch arrangements to make it possible to size warps of one yarn or a combination of yarns at one time and wind them on a single loom beam. **(F-4)**

An extractor-dryer is described in a leaflet from American Standard Fabricators, Inc. The combination high-speed extractor-dryer cuts the time for package drying in half. **(F-5)**

A sample dyeing unit that is electrically operated and requires no steam is described in a leaflet from American Standard Fabricators, Inc. Sample dyeing, extracting, and drying is done in the one stainless-steel unit. **(F-6)**

AUXILIARY EQUIPMENT

Tachometers that operate without a coupling to moving parts are described in a bulletin from James G. Biddle Co. The tachometers operate by touch on a resonance principle. A scale indicates speed in revolutions per minute. **(F-7)**

Resistance thermometer bulbs are described in a catalog from Minneapolis-Honeywell Regulator Co. Temperatures between −20° F. and +300° F. are measured with spans of 20° F. **(F-8)**

Capacity Dynalog instruments for measuring variables are described in data sheets from Foxboro Co. The sheets show how to determine the level, weight, displacement, composition, thickness, moisture, and other previously unmeasurable characteristics of difficult fluids and solids. **(F-9)**

Toggle switches are described in data sheets from Minneapolis-Honeywell Regulator Co. Two-pole, three-hole mounting; four-pole, double-throw; and two-pole panel-mounting switches are described. **(F-10)**

SUPPLIES & CHEMICALS

Insulation for temperatures from −400° F. to +3,000° F. are described in a catalog from Johns-Manville. Transite pipe for overhead and underground water lines and for process lines handling corrosive liquids and gases are described. **(F-11)**

Aluminum-jacketed pipe insulation is described in a bulletin from Pittsburgh Corning Corp. The pipe covering is slipped on the pipe and fastened with bands to give insulation that has moisture-proof, rotproof, fireproof, and acid-proof qualities. **(F-12)**

Industrial rolls engineering data is given in a report from Rodney-Hunt Machine Co. The report assists in the design and selection of rolls for specific plant applications. The modulus of elasticity for seven different materials used for rolls is listed. **(F-13)**

Machine-mounting-pad installation is discussed in a booklet from The Felters Co. Questions are answered on the use of the product, elimination of bolts, reduction of vibration, and the relative costs of methods. **(F-14)**

Glass blocks for industrial buildings are described in a catalog from Pittsburgh Corning Corp. Information on physical performance, technical data on light transmission, insulation values, and installation detail drawings are given. **(F-15)**

Variable-speed drives are described in a bulletin from T. B. Wood's Sons Co. The variable-pitch sheave is adjusted by moving both flanges with a single ad-

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PC® Silicones

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YARN DYED ACETATE

REGULAR FILAMENT

Distinctive and original colors all selected by you — Let *your* selection of shade sell *your* goods — All shades available all the time — Big volume — Prompt delivery.

Jobbers of Natural Acetate & Rayon Yarns

Atlantic Rayon CORPORATION

Dyers and Converters of Synthetic Yarns for All Industries

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Reader Service (Continued)

justing screw. Belt alignment is maintained throughout the range of pitch diameters. **(F-16)**

Dope-dyed yarns are discussed in a leaflet from Celanese Corp. of America. Questions on Celaperm yarn relating to washfastness, sunfastness, gas fading, and dry cleaning are answered. **(F-17)**

Flat transmission belts are described in a bulletin from H. K. Porter Co., Inc. Recommended uses, specifications, construction data, sizes, and lengths of flat transmission belts are given. **(F-18)**

Multiple-groove sheaves are described in a form from Browning Mfg. Co. The sheaves are available in two, three, and four groove and range from 7- to 18.4-in. pitch diameter. The sheaves are designed with a B groove with bushing-bore range of ½ to 1¾ ins. **(F-19)**

Fluorescent whites in peroxide bleaching for knit goods are discussed in a bulletin from Buffalo Electro-Chemical Co. How nonuniform pick up and streakiness can be eliminated by applying the fluorescent agent to gray knit goods before kier bleaching is described. **(F-20)**

Power-transmission equipment is featured in a folder from T. B. Wood's Sons Co. Sheaves, V-belts, hubs, pulleys, flexible couplings, and different-type bearings are described and illustrated. **(F-21)**

ENGINEERING AND MAINTENANCE

Stainless-steel tubing and pipe-selection tips are in a folder from Babcock & Wilcox Co. Information on the comparative corrosion resistance of stainless steels and data on several hundred corrosive media at various temperatures and concentrations are given. **(F-22)**

An industrial water-softener brochure is available from Illinois Water Treatment Co. Data are given on valves, exchange capacities, flow rates, volume of mineral, amount of salt, and exchange-material depth. **(F-23)**

Water filters are described in a catalog from Marvel Engineering Co. Actual size mesh from a .005-in. opening to a .021-in. opening is illustrated. Typical applications are given with a table showing theoretical flow and pressure drop. **(F-24)**

Filter-pump units are described in a booklet from Sethco Mfg. Co. Corrosion-resistant filter-pump design and application are described, and solutions that can be filtered are discussed. **(F-25)**

Flooring compound that withstands loads to 20 tons is described in a bulletin from The Monroe Co., Inc. The compound is made with tough granular plastic resins and can be used to patch or resurface any concrete floor. **(F-26)**

Fluid-power equipment is the subject of a bulletin from The Oil Gear Co. Variable-and-constant delivery pumps for high-speed operation, and constant-delivery duplex pumps for pressures up to 5,000 psi. are described. **(F-27)**

A paint reference chart is available from Tropical Paint and Oil Co. to aid maintenance men in the selection of paints for the protection of more than 30 interior and exterior surfaces. These surfaces include brick, stone, concrete, wood, metal, plaster, and glass. **(F-28)**

A demineralizer is described in a brochure from Penfield Mfg. Co., Inc. The unit is connected to a water tap and delivers mineral-free water up to 10 gals. per hr. **(F-29)**

Tramrail systems are the subject of a catalog from The Forker Corp. Auxiliary equipment available includes switches, cross-overs, cranes, transfer bridges, trolleys, and chain and electric hoists. **(F-30)**

Lubrication control by a color route system is discussed in a brochure from Stewart-Warner Corp. Color symbols are used to control the selection, handling,

NEW!

HERMAS SELVAGE TRIMMER

Today most cloth cleaning is done at the selvages.

We have given considerable time and engineering study to the development of a machine to perform the basic selvage cleaning function without becoming involved in a high cost piece of equipment.

This new Hermas Selvage trimmer meets that need.

It has many efficient features including a guiding device which automatically keeps the cutting head in contact with the selvage despite variation in the line of cloth travel. Where full width shearing is required, conventional revolvers can be added to the selvage trimming machine.

New Selvage Marker

We are now manufacturing and selling the well known Superior Selvage Marking Machines.

This device produces, by means of ink, fine raised printing that has the appearance of being woven into the cloth.

Various models will mark selvages—or backs—of all types of fabrics from synthetics, cottons, silks to woolens, carpets, upholstery fabrics, etc.

Marking is done automatically at speeds up to 120 yards a minute.

HERMAS Jet Mixer

Mixes, on a new principle, dyestuffs, size, and other chemicals with the highest efficiency. Assures fast, *thorough* mixing without any Vortex.

Write for full description of these new machines.

HERMAS MACHINE COMPANY

WARBURTON AVENUE

HAWTHORNE, NEW JERSEY

Reader Service (Continued)

· MEMO ·
TO MANAGEMENT

trucking estimates

can be mighty deceptive!

- Not deceptive in a dishonest way. Maybe "surprising" is a better word.
- Fact is, an estimate on the actual cost of *transportation by truck* doesn't begin to tell the story of what your TOTAL moving cost may be.
- Just figure the cost of all the things to be done in moving a machine . . . such as:

Dismantling, crating, skidding, loading, transfers, unloading, uncrating, placing, unskidding, reassembly . . . and you see how a simple estimate on TRUCKING, only, may deceive you. Trucking's not the WHOLE cost of moving.

Now if you want to REDUCE that cost, and do it in a way to save yourself headaches and loss of time, there's one simple way.

Just put the *whole job* up to Kessler. We'll do it ALL—make direct deliveries to plants or piers without transfers. If it's a big machine, we'll transport it without take-down and reassembly! With 35 years' know-how behind us.

Don't be "deceived" on trucking costs. Be "relieved" . . . just write for details to Kessler Trucking Company, 52-60 Berkshire Ave., Paterson 2, N. J. Or phone MUlberry 4-5132-3; and we'll come running!

"Distributors of Westsorb. Eliminates vibration and wear on your machines. Contact us for additional information."

KESSLER

does the WHOLE moving job!

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Connecticut	Delaware	Maryland
Massachusetts	New Hampshire	New Jersey
New York	North Carolina	Pennsylvania
Rhode Island	South Carolina	Georgia
Tennessee	Virginia	West Virginia
District of Columbia		Ontario, Canada

Reader Service (Continued)

and application of oils and greases from the barrel to the machine. **(F-31)**

Slow-speed electric-power drive scale drawings are available from Sterling Electric Motors, Inc. Ratings from ½ to 30 hp. are included, and the drawings are adaptable to almost any drafting requirements. **(F-32)**

Conveying equipment is the subject of a catalog from The Rapids-Standard Co. Application suggestions on portable-and-permanent-type belt units and gravity wheel and roller conveyors in steel and aluminum are given. **(F-33)**

Hoists are described in a bulletin from Coffing Hoist Co. Ratchet lever hoists with capacities from ¾ to 15 tons, standard and special spur-gear hoists, electric hoists, and utility maintenance tools are described. **(F-34)**

Materials handling is discussed in a bulletin from Nutting Truck and Caster Co., Inc. Fifty different models of floor trucks, 12 types of dollies, and 16 styles of casters are described. **(F-35)**

Electric counter actuators are described in a bulletin from Production Instrument Co. Special electric switches, floor-mat switches, impact switches, surge switches, and photoelectric equipment for actuating electric counters are described. **(F-36)**

Fractional-horsepower motors are described in a catalog from Century Electric Co. The motors feature aluminum squirrel-cage rotor construction and wool-yarn lubrication. The stator winding is dehydrated and saturated with thermal-setting baked plastic varnish. **(F-37)**

Fork-truck attachments are described in a leaflet from Lewis-Shepard. Cardboard cartons and wire-bound crates can be loaded, unloaded, transported, and stacked without using pallets, forks, or dunnage. Two hooks engage the crate under the top board. **(F-38)**

Tramrails are discussed in a leaflet from The Cleveland Crane and Engineering Co. The rail is used for loads up to three tons where sufficient supports are provided. **(F-39)**

Neoprene coating for general protective service is described in a leaflet from Carboline Co. Surfaces can be painted wet or damp. One gallon covers 80 sq. ft. of surface with a brush coat. **(F-40)**

GENERAL

Stop watches and chronographs used for timestudy are described in a release from Herman H. Sticht Co., Inc. The watch has a nonbreakable coil-spring mechanism to replace flat levers at all critical wearing points. **(F-41)**

"A Simplified Order-Invoice Plan" is a method described in a booklet from Remington Rand Inc. The method uses either offset, hectograph, or stencil duplicating with the order form top printed on the face of the duplicating master. **(F-42)**

Packaging is discussed in a booklet from Union Carbide and Carbon Corp. Information on the latest applications of molded and blown plastics, coatings, adhesives, film, and rigid sheet materials for packaging and display is given. **(F-43)**

"A Proposal for Managements with Vision" is the title of a new brochure from CDC Control Services, Inc. A specialized engineering service for making plant operations automatic by consultation, analysis, and design is described. **(F-44)**

Photometric properties of products are discussed in a circular from Hunter Associates Laboratory. The circular describes the laboratory, which supplies research instrumentation and technical service on optical appearance of manufactured goods and raw materials. **(F-45)**

Evaluating apprentices is a digest from the U. S. Dept. of Labor. How to

PQ® Silicates
BELONG IN WET PROCESSING

because they . . .

1. Increase detergent action.
2. Prevent redeposit of removed soil.
3. Work efficiently with phosphates, synthetic detergents, soaps, sodium perborate, peroxide.
4. Control pH at safe level.
5. Are economically priced as basic chemicals.

Write for suggestions for use in your formulas.

PQ Silicates—sodium silicates, metasilicate, sesquisilicate, orthosilicate.

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PQ® Soluble Silicates
METSO® DETERGENTS

The BEST Costs No More!

Because of our many years experience in the Textile trade, we can offer you the best in filling winders for any kind of yarn going into the shuttle at a price you can well afford. Just send us a small supply of your yarn and we'll wind and return with Test Wind Report and Catalog.

The *automatic* copy winder is now test running in our plant and will be shown at the American Textile Machinery Exhibition in Atlantic City, April 26th to 30th.

THE F. A. LAZENBY CO.
3106 Elm Ave.,
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breaking strength, elongation, elastic recovery, energy absorption, and tenacity

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a "U.S." Service Man is right near you

When a U. S. Representative visits your mill, he offers a world of useful data on MODERN traveler practice—plus the finest travelers it is possible to produce.

For your BLENDS try "Bevel Edge"

The anti-friction design of these travelers, gives reduced end breakage, and in other ways helps spin blends more smoothly.

Prompt shipment from Providence & Greenville stocks

"A Style and Size for Every Textile Fibre!"

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H. R. Fisher
Concord, N. C.—Box 83—Phone 2-8930

H. J. Smith
Providence—Box 1187—Gaspee 1-0100

Reader Service (Continued)

figure the cost to train apprentices and their value as journeymen after training is described. **(F-46)**

"101 Ways to Apply Electric Heat" is the title of a booklet from Edwin L. Wiegand Co. Some of the heating jobs illustrated can only be done by electricity. Physical aspects of installation are shown with the problem, solution, and advantages gained. **(F-47)**

Six basic ways of unit bundling are described in a folder from Signode Steel Strapping Co. Methods of bundling pallets, crates, cases, and containers are described. **(F-48)**

Automatic tying machines are described in a bulletin from B. H. Bunn Co. Practical ways to cut costs in shipping and mailing rooms are described, and figures are cited to show that machine tying is 4 to 10 times faster than hand tying. **(F-49)**

An electronic punched-card computer is described in a brochure from Remington Rand Inc. The machine offers universal calculating ability, flexible programming, removable control panels, built-in automatic verification of results, and alphabetical reproduction. **(F-50)**

Books of Interest

240 Visual Aids for Human-Relations Training

HUMAN RELATIONS AND MANAGEMENT, Motion Pictures for Industry; Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., 26 pages, $1.

Here is a 240-item list of audio-visual aids, motion pictures, film strips, and recordings; each item is classified, described, and the source given. The list includes such subjects as securing employee cooperation, disciplining, handling grievances, giving instructions, organizing work, creating and maintaining interest, building morale, counseling, and conducting conferences.

Twist Affects Higher Deniers More Than Lower

A STUDY OF THE EFFECT OF TWIST ON THE PROPERTIES OF SYNTHETIC FILAMENT YARNS, Georgia Institute of Technology and Georgia State Engineering Experiment Station for U. S. Air Force; Office of Technical Services, U. S. Dept. of Commerce, Washington 25, D. C.; 142 pages, $2.

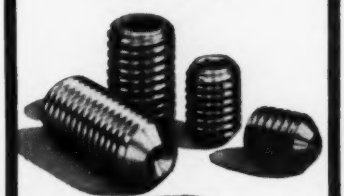
A recent study at N. C. State College [TW, Feb., '54, p. 110] substantiated many of the findings of this study at Georgia Tech.

In the Georgia Tech study, a systematic investigation was made of the effect of twist on the properties of rayon, nylon, Dacron, and Orlon—denier, diameter, dry

NEW
Allenpoint
Set Screws
WITH
SCIENTIFICALLY-DESIGNED
SMALLER CUP POINTS

Tested comparatively by United States Testing Company* with standard cup point screws and screws with angled and serrated points, the new Allenpoint demonstrated (1) greater locking power at *all* measured installation vs removal torque pressures, (2) uniformly high shaft holding power in torque resistance tests, (3) unmatched performance under vibration, and (4) more complete shaft contact pattern. Sold *only* by leading Industrial Distributors. Write for more facts about the results of these important tests of set screw performance.

**Report No. E 5576, March 17, 1953.*



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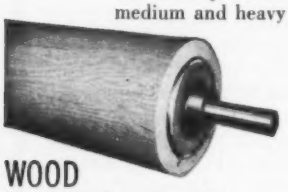
MANUFACTURING COMPANY
Hartford 2, Connecticut, U.S.A.

SHAF-TITE®
TEXTILE ROLLS

RUBBER Neoprene, natural rubber, Hycar rolls. Light and medium-duty carrier rolls and heavy-duty squeeze rolls.

METAL Steel, brass, aluminum, stainless steel and chromium-plated for light, medium and heavy duty.



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For all makes of textile washers and mangles: Self-Seal*, White Seal*, Anchor Seal* solid rock maple rolls. For fulling mills: wood lag rolls and wood lags. General purpose: Shaf-Tite, solid wood or kiln-dried wood carrier rolls.
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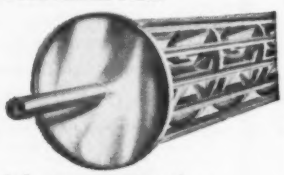

REELS
Patented girder-type construction; stainless steel reels up to 20 feet in length for any make of machine. Round, hump, triangle, and oval.

FREE! Send for 64-page catalog. Permanent reference work for all rolls. Includes inquiry dimension sheets, care of wood and rubber rolls, and engineering data. RODNEY HUNT MACHINE CO., 54 Maple St., Orange, Mass., U.S.A.

RODNEY HUNT

INDUSTRIAL ROLL DIVISION
Manufacturing Engineers Since 1840

breaking strength, elongation, elastic recovery, energy absorption, and tenacity.

Results indicate that breaking strength of rayon and Orlon rises slightly with small amounts of twist, remains constant for a short range, and then decreases with added twist. Strength of nylon and Dacron does not fall off until high twist has been added.

Tenacities of all yarns except Dacron are highest at relatively low twists and then decrease rapidly. Nylon and Dacron yarn are the least affected by the addition of twist. In general, the effect of twist on any property of yarn is greater for the higher deniers than the lower.

Introduction to Fiber Structure for the Student

THE STRUCTURE OF TEXTILE FIBERS, edited by A. R. Urquhart and F. O. Howitt; The Textile Institute, 10 Blackfriars St., Manchester, England; cloth, 165 pages, **$1.75.**

Intended as an introduction to fiber structures for people who don't know much about fiber structure, this book succeeds in presenting a highly complicated subject in reasonably simple descriptions. Fibers covered are cotton, silk, wool, flax, long vegetable fibers, rayon, acetate, protein, alginate, and synthetics. General chapters on "Why are Fibers Fibrous?" and molecular arrangements precede the treatment of each type of fiber.

Regional Study Suggests Marketing Improvements

ECONOMICS OF PREPARING WOOL FOR MARKET AND MANUFACTURE, by D. W. Carr and L. D. Howell, U. S. Dept. of Agriculture (Bulletin No. 1078); Superintendent of Documents, Washington 25, D. C.; paper, 88 pages, 30¢.

This study is one of a series under a government regional-research project concerned with the preparation and processing proving the market value of wool.

Much of the data was collected in interviews with mill men and dealers. The general conclusions are for the growers in the Western States to get together and supply wool prepared like Australian wool. Quality standards for the ranch preparation of wool are needed, as well as coordinated selling efforts.

Welding Is Covered From Beginning to End

WELDING ENGINEERING, by Boniface E. Rossi; McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36, N. Y.; cloth, 786 pages, $8.

When you come down to it, there is a lot to say about welding. This book says just about all of it. It is technical but written with a practical approach. It covers the basic types of welding techniques and safety precautions and has a complete section on the design and fabrication of welded equipment. This book is recommended for people who want to know more about welding.

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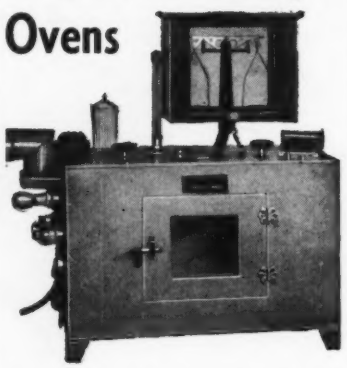

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Wherever quantities of water are held, circulated, or processed, they gradually deposit suspended salts such as magnesium and calcium carbonates in layers of scale on the surface of equipment. In textile plants, this scale occurs in feed-water heaters, water-cooled air-compressor jackets, refrigerative condensers, revolving rotors in humidifiers, and in many other types of equipment.

Jackets of water-cooled air compressors and other types of equipment can be cleaned intact by using crocks or 50-gal. metal drums filled with water and a descaling solution. The water and descaling mixture are circulated through the system by the application of steam or by applying pumps to the crocks.

Select a Good Tank

Smaller and easily removed parts are usually cleaned in a tank. Where parts or equipment are immersed in tanks or containers holding descaling compounds, care must be exercised in selecting the container.

Ceramic crocks and wooden- or rubber-lined steel tanks are the most suitable tanks for holding solutions. Properly constructed long-leaf yellow pine tanks are also recommended where the volume of work is larger than may be accommodated in crocks. A well-made tongue-and-groove-joined tank, similar to those used in steel-mill pickle houses, is inexpensive and will generally give good service for one to two years.

A good tank can also be made from cement. The tank walls should be 6 ins. thick, and the interior should be coated with a bituminous paint such as roofing or asphalt compound or tar.

Coat the Tank Surface

If a steel tank is already available, it should be coated with an acidproof paint to prevent deterioration by acid. Be sure the metal is dry before applying the paint to the tank surface. To assure better paint adhesion, wipe the surfaces with a neutralizing agent be-

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tire molecule; but because it splits off when the treated fabric is cured, it

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fore painting. Apply several light layers of paint rather than one thick coating.

Tanks can be used with a cold solution for soaking, or they can be equipped with pumps to agitate the liquid. Heating units are also used to heat the solution for quick removal of obstinate particles of scale.

After the scale has been removed from the equipment or parts, drain the tank and rinse the equipment with fresh water. Then neutralize the equipment with an alkaline material, and rinse again thoroughly.

Use Caution in Handling Acids

The usual safety measures followed in handling any acid material should be observed in handling scale remover. A few of the important measures are:

1. Do not permit the solution to come in contact with your skin or clothing or to splash into your eyes.

2. Perform the descaling operations away from all fire, sparks, or other ignition sources.

3. Do not splash the solution on concrete floors because its lime-dissolving properties will attack the lime. If the solution does get on concrete surfaces, neutralize the acid with an alkaline solution.

4. Have an adequate air flow above open tanks or crocks to dilute gases formed from descaling zinc, cadmium, tin, sulfur, arsenic, and cyanide.

Under ordinary conditions on other metals, carbon dioxide, a harmless gas, is formed. *Oakite Products, Inc.*

Chemical Finishing Techniques

CONTINUED FROM PAGE 93

capable of reacting with the cellulose fibers to provide a washfast bond. Since the single hydroxyl is not sufficient to solubilize the long hydrocarbon group, the product had to be emulsified prior to application. A cure was necessary to react the compound with the cellulose.

3. A further improvement came when methylol-stearamide was further modified by a process known as quaternization to form a combination solubilizing-reactant group (see the lower half of the second illustration). This material eliminated the need for an emulsifier. The quaternary group is not only a powerful solubilizer that can confer water-solubility to the en-

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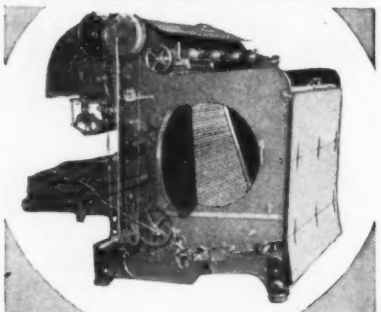

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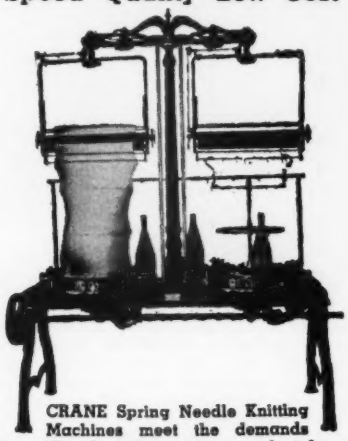

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tire molecule; but because it splits off when the treated fabric is cured, it allows the balance of the molecule to combine with the cellulose. Zelan is an outstanding example of this type of product.

Instead of reacting with cellulose, part of the product may dimerize (that is, two molecules may combine with each other) and form a hard wax having the structure:

[Hydrocarbon]—CONH—CH_2—NHCO—Hydrocarbon

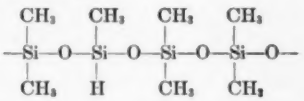
Such a wax on the surface of the treated material is probably responsible for the 100 spray rating that is originally obtained on the treated fabric, while the fraction of the product that combines with cellulose is responsible for the 70 spray rating to which the fabric levels off after multiple washings.

4. More recently, several resin-based products have appeared on the market. These products combine a waxy hydrocarbon with a resin-forming molecule that may also react in part with the cellulose. Both the resin formation and the cellulose reactivity contribute to washfastness of the finish (upper half of the third illustration). In addition, the molecule may be further modified to obtain temporary self-solubilization so that the use of an emulsifier is not necessary (lower half of the third illustration). Permel is probably of the latter type.

Because of the waxy nature of the hydrocarbon, water repellents tend to be excellent softeners. Where softness is a disadvantage, the resin-repellent types will be found desirable because the firmness of the resin partially counteracts the softening effect of the wax.

Newest Water Repellents Are Silicone Polymers

The newest type of water repellent is based on silicone polymers, which do not depend on a waxy hydrocarbon for their hydrophobicity but are based on structures such as:



The usual types of silicones have no solubilizing group and must be emulsified for application to fabric. The H atom in the molecule illustrated is a reactive one that will split off during the cure. This characteristic permits several silicone chains to interact to form a very hydrophobic thermoset polymer that can no longer be emulsified. The greatest durability is obtained on hydrophobic fibers that do

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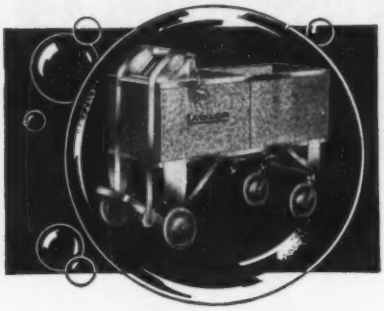

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not swell when they are wet; but with proper compounding, the silicones are also effective on cotton and rayon.

Because the silicones contain no long hydrocarbon (waxy) chains, they impart lubricity and softness only at low concentrations and tend to stiffen when used in greater amounts. As a result, they have been suggested for durable stiffening of acetate fabrics.

Water repellents of all types are much used nowadays as components of spot-resistant finishes. These finishes will resist spotting by water-borne soil but will not resist oily stains. (As a matter of interest, it might be mentioned that no known water repellent will resist wetting by a 50%-alcohol solution.)

Shrinkage Control

There are several reasons why fabrics shrink. Cottons and rayons shrink largely because the fibers swell. As was pointed out many years ago, a cellulosic fiber increases in both diameter and length when wet (see the accompanying sketch); yarn increases in diameter but tends to decrease in length because the twisted fibers must traverse a greater distance around the swollen yarn; and fabric shrinks, not only because of the shorter yarns, but also because the filling yarns must traverse a greater distance around the swollen warp yarns, and vice versa.

The accompanying sketch is somewhat oversimplified, since a relaxed rayon fabric will often stretch when it is wet and begin to shrink only when the moisture content has been reduced to about 40%. Nevertheless, it is generally true that a fabric exhibiting high fiber swelling shrinks, while a fabric exhibiting low fiber swelling does not shrink. That is why rayon shrinks excessively, acetate considerably less, and nylon very little. It follows that by reducing fiber swelling we can reduce fabric shrinkage.

With rayon, fiber swelling can be accomplished in three ways (see the second sketch):

1. In the first method, a thermosetting surface resin (such as acid-aged melamine or polymeric urea-formaldehyde syrup) seals the pores of the fibers and coats the fibers with a sheath of resin that prevents them from swelling. Such a material also bonds fiber to fiber and yarn to yarn and thus stiffens the fabric.

Not all materials that stiffen fabric

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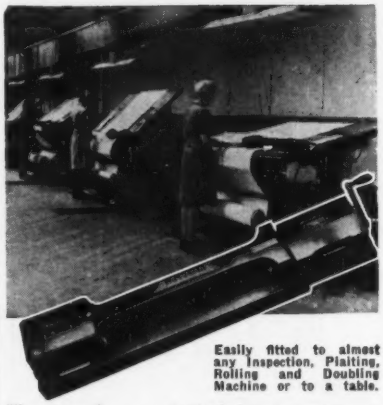

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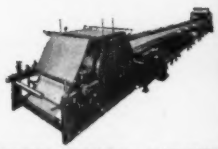

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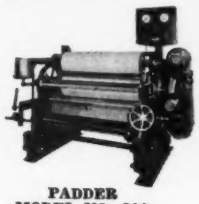

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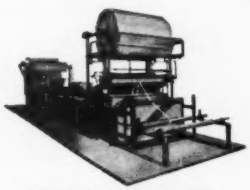

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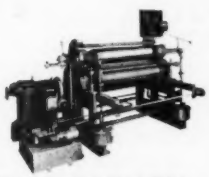

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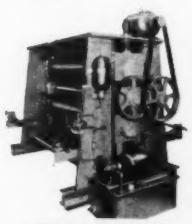

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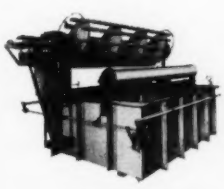

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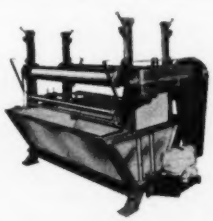

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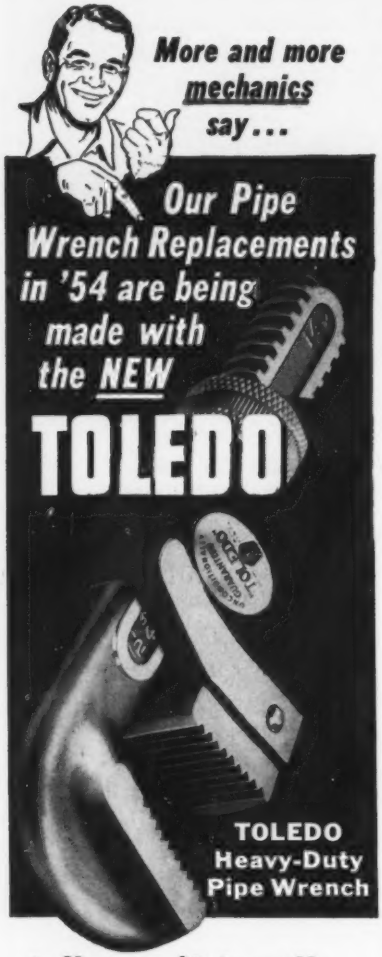

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Rhonite 414	I (thermosetting)	Good	High
Rhonite 610	II (resin former)	Good	Slight
Rhonite R-2	II (resin former)	Very good	Slight
Rhonite R-1	III (reactant)	Excellent	None
Formaldehyde	III (reactant)	Excellent	None
R-2 plus 414	(II, I)	Very good	†
R-1 plus polyvinyl alcohol	(III, I)	Excellent	†
Formaldehyde plus hydroxyethylcellulose	(III, I)	Excellent	†

* Type I is polymeric and goes on the surface; Types II and III go inside the fiber.

† Can be varied from low to high by increasing the amount of surface polymer.

will prevent shrinkage, however; for example, thermoplastic polymers are generally worthless in this application.

2. In the second method, a resin-forming monomer (such as a urea-formaldehyde paste, its melamine equivalent, or one of the monomeric liquid resins now on the market) penetrates cellulosic fibers and forms a resin polymer on the inside, generally with some chemical attachment to the cellulose. It usually gives a soft but slightly full finish.

3. The third method involves cellulose reactants (such as formaldehyde, certain difunctional urea-formaldehydes, and other non-resin-forming materials) that penetrate the fiber and crosslink the cellulose. They generally give a very soft finish, due in part to complete absence of surface polymer. This method gives the most durable shrinkage control.

The accompanying table gives a comparison of the properties of fabrics stabilized with the three types of product.

It will be noted on the table that combination effects are also possible. For greatest durability with added crispness, a crosslinker (III) plus a surface resin (I) may be used. Likewise, the full hand of II may be built with I.

Many water-soluble polymers (starch, polyvinyl alcohol, gelatin, etc.) may be insolubilized by formaldehyde or formaldehyde resins. When such a combination is used, part of the resin penetrates into the fiber, modifying it internally, and part remains on the surface, insolubilizing the polymer to provide an external component that imparts stiffness to the fabric. This action permits bodying of an otherwise soft finish without interfering with the excellent stabilization.

Strain-Relaxation Shrinkage

Another reason for fabric shrinkage is the relaxation of strains incurred during manufacture. Synthetic fibers such as nylon shrink in this way. If we subject freshly drawn nylon to heat, it contracts. To prevent this contraction, the nylon, generally in fabric form, is heated under tension to a temperature higher than it will ever reach in use. This process, known as heat setting, makes nylon immune to relaxation shrinkage at lower temperatures. Ordinarily, no chemicals are required in this process.

A third reason why fabrics shrink is exemplified by wool. The wool fiber is covered with scales; and when a woolen fabric is washed, the lubricity and mechanical working causes fiber migration in the direction of least resistance. The resultant interlocking of the scales produces a felting that is practically irreversible.

The remedy is (1) to "round off" the scales either by chlorination or by treatment with a specific enzyme; or (2) to "gum up" the scales (that is, partially cover them up) by treatment with a surface resin. In either case, felting is effectively reduced. In the latter type of treatment, which probably involves a little fiber-to-fiber bonding, melamine-formaldehyde resin is generally used; but certain urea resins and a few types of thermoplastic polymers may also be used.

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● With a reputation for producing fine woolens since 1915, The Bell Company of Worcester, Massachusetts, is very particular about the quality of soaps used in their scouring facilities. Yes — Swift's Vertex Flakes, really treat woolens right. Made from the highest grade distilled red oil, Vertex Flakes quickly and gently remove oils and greases picked up in spinning or weaving operations. Because of their low titer (8-12°C), Vertex Flakes dissolve out troublesome contaminants quickly — even at low water temperatures. Swift's Vertex Flakes are highly recommended and widely used wherever fine dyeing calls for complete, yet gentle scouring.

The Bell Company is another of the many leading textile firms that specify Swift's soap for their scouring needs. They know that the name Swift in soap is backed by years of specialized experience and that Swift's soap products are readily available from 375 locations throughout the U. S. and Canada.

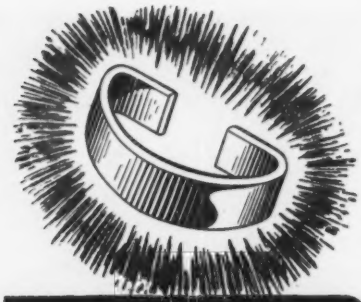
Yes, there is a Swift's Soap for your textile needs and a Swift's distributor near you . . . so, the next time you need soap — Call Swift for service and dependability.

ONE TRIAL IS BETTER THAN A THOUSAND CLAIMS

Swift SOAPS

Another of Swift's Products for Industry

SWIFT & COMPANY
Industrial Soap Department
U.S. Yards · Chicago 9, Illinois



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Ring Travelers

FIFTY YEARS
IS A
LONG TIME

For fifty years and more, Dary ring travelers have enjoyed a sound reputation in the textile trade. We at Dary are proud to have maintained that reputation so consistently—because half a century is a long, long time.

Our experience is yours to command. Consult your friendly Dary representative!

Always specify
DARY Ring Travelers

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LINDSEY I. PHILLIPS, TREASURER, TAUNTON, MASS.
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JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD "JACK" RHYMER, BOX 2261, GREENVILLE, S. C.

Textile Calendar

International Trade Exposition, textile machinery included, Utrecht, Holland, March 30 to April 8.

ASQC, Carolinas Section, spring meeting, Clemson College, Clemson, S. C., April 2.

Delta Kappa Phi Fraternity, national convention, N. C. State School of Textiles, Raleigh, N. C., April 2 and 3.

National Packaging Exposition, sponsored by American Management Assn., Convention Hall, Atlantic City, N. J., April 5 to 8.

Greater New York Safety Conference, New York, N. Y., April 6 to 9.

CMA of Georgia, annual convention, Boca Raton Hotel Club, Boca Raton, Fla., April 7, 8, and 9.

West Virginia Safety Conference, Charleston, W. Va., April 14 to 16.

STA, South Carolina Div., Ware Shoals, S. C., April 15.

Textile Industry Electrical Conference, Textile Building, Georgia Tech, Atlanta, Ga., April 15 and 16.

TOE of Alabama, spring meeting on service depts., Thatch Hall, Auburn, Ala., April 17.

LTI Alumni Meeting, Haddon Hall, Atlantic City, N. J., April 28.

Michigan Safety Conference, Detroit, Mich., April 20 to 22.

ACMI, annual meeting, Jung Hotel, New Orleans, La., April 22 to 24.

AATCC, New York Sect., Swiss Chalet, Rochelle Park, N. J., April 23.

STA, Northern N. C.-Va. Div., White Oak YMCA, Greensboro, N. C., April 24.

AMA, manufacturing conference, Hotel Statler, Cleveland, Ohio, April 26 to 28.

American Textile Machinery Exhibition, sponsored by American Textile Machinery Association, Atlantic City Auditorium, April 26 to 30.

Industrial Health Conference, Hotel Sherman, Chicago, Ill., April 26 to 30.

National Assn. of Hosiery Manufacturers, annual meeting, Claridge Hotel, Atlantic City, N. J., May 3 and 4.

Hosiery Industry Conference, annual conference, Claridge Hotel, Atlantic City, N. J., May 3 and 4.

President's Conference on Occupational Safety, Washington, D. C., May 3 to 6.

Air Pollution Control Assn., annual meeting, Patton Hotel, Chattanooga, Tenn., May 3 to 6.

British Industries Fair, industrial section, Castle Bromwich, Birmingham, England, May 3 to 14.

North Carolina Safety Conference, Raleigh, N. C., May 4 to 6.

The Fiber Society, spring meeting, Institute of Textile Technology, Charlottesville, Va., May 5 and 6.

American Society of Training Directors, annual conference, Schroeder Hotel, Milwaukee, Wis., May 5 to 7.

Welding and Allied Industry Exposition, Memorial Auditorium, Buffalo, N. Y., May 5 to 7.

National Assn. of Woolen and Worsted Overseers, semiannual convention, Hotel Manger, Boston, Mass., May 7 and 8.

STA, Piedmont Div., Hickory, N. C., May 8.

TOE of Georgia, A. French Textile School, Georgia Tech, Atlanta, Ga., May 8.

Swiss Industrial Fair, Textile Machinery Exposition, Basel, Switzerland, May 8 to 18.

Western Safety Conference, Spokane, Wash., May 16 to 19.

Basic Materials Exposition, International Amphitheatre, Chicago, Ill., May 17 to 20.

NACM, 100th anniversary, Somerset Hotel, Boston, Mass., May 19 and 20.

AATCC, New York Sect., Swiss Chalet, Rochelle Park, N. J., May 21.

Operations Research Society of America, annual meeting, Edgewater Beach Hotel, Chicago, Ill., May 21 and 22.

SCTMA, annual convention, The Cloister, Sea Island, Ga., May 27 to 29.

International Congress of Man-Made Textiles, Paris, France, May 31 to June 3.

Canadian International Trade Fair, Toronto, Ont., Canada, May 31 to June 11.

Society of the Plastics Industry, Public Auditorium, Cleveland, Ohio, June 7 to 10.

The Textile Institute, annual conference, jointly with the Society of Dyers and Colourists, Grand Hotel, Scarborough, England, June 8 to 11.

STA, annual convention, Ocean Forest Hotel, Myrtle Beach, S. C., June 10 to 12.

Philadelphia Textile Institute, annual alumni reunion, Manufacturers Golf and Country Club, Oreland, Pa., June 11.

Management Course, College of Engineering, State University of Iowa, Iowa City, Iowa, June 14 to 26.

National Safety Council, Textile Sect. committee meeting, New York, N. Y., June 15 and 16.

World Congress on Surface-Active Agents, Sorbonne, Paris, France, Aug. 30 to Sept. 3.

Canadian Textile Seminar, Queen's University, Kingston, Ontario, Sept. 9 to 12.

The Fiber Society, fall meeting, in conjunction with Textile Technical Federation of Canada and Canadian Assn. of Textile Colorists, McGill University, Montreal, Canada, Sept. 13 and 14.

AATCC, national convention, Atlanta Biltmore Hotel, Atlanta, Ga., Sept. 15 to 18.

Industrial Packaging and Materials Handling Exposition, Competition, and Short Course, Chicago Coliseum, Chicago, Ill., Sept. 27 to 30 (course), Sept. 28 to 30 (exposition).

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 4 to 8.

N. C. Textile Mfg. Assn., annual meeting, Carolina Hotel, Pinehurst, N. C., Oct. 14 and 15.

TOE of Georgia, A. French Textile School, Georgia Tech, Atlanta, Ga.,

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Crystal Hypo

(SODIUM THIOSULFATE)

in 2 preferred sizes

Prismatic Rice (thru 4 on 14 mesh)
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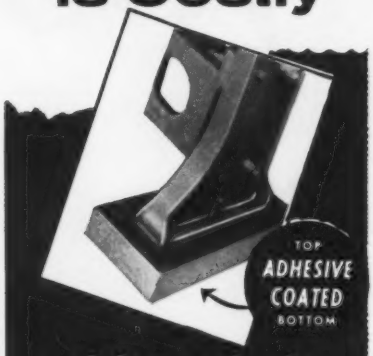

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Mount looms and knitting machines on vibration-dampening WESTSORB. They will last longer, cost less to maintain. No more shut-downs due to ruinous vibration; no more breakdowns of equipment and building structures. You'll have much better employee morale and efficiency when noise is reduced.

It's so simple! WESTSORB is adhesive-coated on both sides, holds firmly on old equipment or new; any floor. No holes, no bolts, and the wiry wool fibres in WESTSORB never fatigue. WESTSORB mounts resist oil, acid, grease, water and age; never fray nor ravel.

There's a special 18-page booklet waiting for you; gives data on actual WESTSORB efficiency tests under looms and knitting machines. Cooperating Western Felt dealers and engineers are located throughout the textile areas. Write today for information, or engineering assistance.

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News OF THE MONTH

WORLD ECONOMIC HEALTH

J. Craig Smith, first vice president of the American Cotton Manufacturers Institute and president of Avondale Mills, recently called for the "elimination of artificial trade walls" to aid the economic growth of the world's underdeveloped areas. Lowering tariffs, however, would only channel goods into areas of abundance. He recommended "a return to free interchangeability of currencies." Mr. Smith also pointed out that "a comparatively small increase in the world's per capita consumption of cotton could make the world's textile capacity totally inadequate."

NYLONS STILL HAND WASHED

The National Association of Hosiery Manufacturers has "reluctantly concluded" that washing machines are still not good enough to wash nylon hosiery. The association recommends that women buy enough hosiery to be able to hand wash a week's supply at a time.

ECONOMIC UNDERSTANDING

A better understanding of basic economic processes among management people is the goal of a new program operated by the Society for the Advancement of Management. The program will operate through a series of round-table discussions in the local chapters of the society. Information is available from the society at 74 Fifth Ave., New York 11, N. Y.

SAFETY POSTER

"The Ten Commandments of Safety for Supervisors," a two-color poster prepared by American Management Association, is available from the AMA, 330 W. 42nd St., New York 36, N. Y. A sample commandment: "Anticipate the risks that may arise from changes in equipment or methods. Make use of the expert safety advice that is available to help you guard against such new hazards." Price: 25¢ per single copy, discounts for quantity purchases.

JERSEY TRADE ASSOCIATION

The Jersey Institute was recently formed to serve the interests of manufacturers and distributors of jersey fabrics. Activities will be directed toward the fashion trades. William Heller of William Heller, Inc., is the first chairman.

MILL SECRETS AT STAKE

Standard-Coosa-Thatcher Co. has asked the Chancery Court in Chattanooga to restrain Paul M. Hall from carrying away "any information he has" concerning the company's operation. Mr. Hall resigned as assistant superintendent of one of the Standard-Coosa-Thatcher plants to become a superintendent with another company. The complaint states that Mr. Hall had "intimate knowledge" of Standard-Coosa-Thatcher's "special property and secret processes."

FREE-LOAN FILMS

A list of free-loan 16-mm. sound films, many in full color, has been compiled by the Princeton Film Center, Inc., Princeton, N. J. Most of the films are said to be suited to industrial audiences. Requests should be directed to the film center.

SAFETY HONORS

SAFETY TROPHY awarded to the winner of the world-wide contest among the plants of the Goodyear Tire & Rubber Co. went to Goodyear Decatur Mills, Decatur, Ala. C. W. Young, superintendent (right), and W. S. Hunter, personnel manager (center), accept the Goodyear trophy from F. W. Climer, a Goodyear vice president. Goodyear Decatur also won the Comer cup for the Spinning and Weaving Div. in the safety contest sponsored by the Alabama Cotton Manufacturers Association.

SUNNY CALIFORNIA

The City of Los Angeles is cooperating with leaders of the apparel industry in Southern California to try to bring cotton mills to the Los Angeles area. "It is astonishing to me," said the mayor, "that none of the major mill operators has acted on the opportunity in this area."

PENNSYLVANIA PLANT SITES

A special brochure on plant sites in Pennsylvania will be prepared on request by the Department of Commerce, Harrisburg, Pa. Half of the brochure will contain general information about the state and the other half will be specially prepared data on transportation, taxes, labor supply, wages, water, etc. of any particular area. Address inquiries to William W. Behrens, deputy secretary.

DYELESS COLORING

A method to color wool and silk materials without the use of dyes has been reported by Karoly Bene, a Hungarian chemical engineer. The method is said to make wool more pliable and resistant to tearing. The fiber is treated with sodium nitrite and acid, which in effect diazotizes the fibrous materials. The fiber is then treated with an aromatic chemical; finally, metallic salts fix the color.

NEWS ABOUT FIBERS

▶ Metallic staple in lengths from 1¾ to 3 ins. is available from the Dobeckmun Co., 250 W. 57th St., New York 19, N. Y. The staple is 1/128 in. wide. Staple Lurex is said to mix with natural or synthetic fibers.

▶ Chemstrand nylon is now available in commercial quantities. Four numbers are being produced: 15/1 at $6 per lb., 30/10 at $2.70, 40/13 at $2.25, and 70/34 at $1.90.

▶ Du Pont is making dope-dyed acetate yarn in its Waynesboro, Va., plant. Standard colors now available are navy blue, black, scarlet, and maroon. Green and gold will follow shortly, and other colors are under consideration.

▶ Du Pont also is making available to full-fashioned mills running 72- and/or 75-gauge machines small quantities of 10-den. nylon for experimental purposes.

▶ Dope-dyed Dynel showed high resistance to color destruction in tests made by AATCC. In a 30-min. dry-heat test, all colors remained unchanged after exposure at 248° F. There were slight changes in some colors after 140-hr. tests in a Fade-O-Meter.

▶ American Cyanamid Co. has developed another experimental acrylic fiber. Called X-54, the fiber is said to be dyeable without the cuprous-ion technique. It has a softer hand than X-51.

SRRL OPENER

MAID OF COTTON (right), Miss Beverly Pack, saw the SRRL opener (background) in operation on a recent visit to the Southern Regional Research Laboratory in New Orleans. James R. Corley (left), of the SRRL staff, and Miss Pack hold equal weights of unopened and opened cotton.

MILL DEVELOPMENTS

▶ J. P. Stevens & Co. has come out with a sheet made of a combed-cotton and nylon blend.

▶ Davenport Hosiery Mills, Chattanooga, Tenn., is making stockings with no steps in the heel. They have a 60-gauge, 12-den. construction with faint heel, toe, and sole reinforcements.

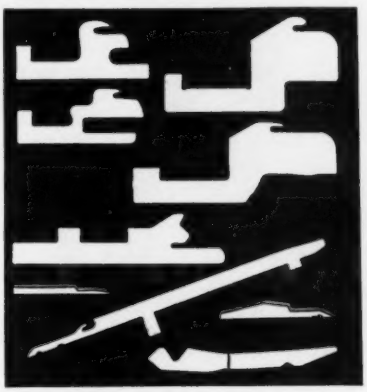
▶ Shuford Mills, Inc., Hickory, N. C., has developed a new consumer package for twine. The ball of twine is enclosed in pliofilm with a neck for the twine to unwind from the inside.

▶ Marionette Mills, Inc., S. Coatsville, Pa., has started commercial production of Flufton, which is thrown continuous-filament yarn that has been given a permanent "fluffing." Fabrics knitted or woven from Flufton are said to have a soft, foam-like appearance. Patents on the process are pending.

▶ Screening woven of vinyl-coated Fiberglas yarn is being produced by Lock-Set Screening Co., Inc., Canton, Mass.

▶ Nycar, a seat-covering material woven of 900-den., high-tensile-strength rayon, has been introduced by Ellenboro Mills, Inc., Ellenburg, N. C. The material is resistant to burns.

WANT TO KNIT FINER FABRICS AT LESS COST?



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IVES SINKERS AND SLIDERS

Ives products also include all shapes and gauges of Jacks and Transfer Points or Quills for circular hosiery machines and all gauges of Guides, Sinkers and Sley Points for Tricot and Raschel machines.

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NEWS ABOUT Suppliers

Equipment Suppliers

Alvey Conveyor Mfg. Co., Saint Louis, Mo., has appointed Alfred J. Barchi sales engineer of the company's Philadelphia sales office.

Babcock & Wilcox Co., New York, N. Y., has elected N. Nielsen, vice president, to the board of directors. Mr. Nielsen will be in charge of the company's Boiler Div. He succeeds the late J. H. King. W. D. Sullivan has been elected a vice president. Mr. Sullivan will be in charge of the manufacturing department of the company's Boiler Div.

Borg-Warner Corp., Chicago, Ill., has established a Market Research Dept. The new department will be headed by John A. Drake, director of market research.

Brush Southeastern Textile Instrument Sales & Service Office has been established in Greenville, S. C., by the Brush Electronics Co., Cleveland, Ohio. The new office will be under the supervision of D. M. Gaskill, supervisor of the Textile Section.

Container Corp. of America, Chicago, Ill., has elected Carl M. Blumenschein vice president and controller.

Crown Export Co., Inc., New York, N. Y., is opening a branch office in Manila, P. I. William E. Conlon will be manager of the office.

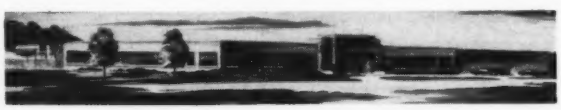
Robert Gair Co., New York, N. Y., has appointed Alfred W. Hoffman quality-control manager for the container divisions. Other appointments are: Otto M. Miller, general manager of the Angelus Paper Box Co., a division of Gair; Albert E. Bush, general manager of the Angelus Corrugated Box division; and Heinz Ahlmeyer, assistant division manager of the Gair Cartons division.

JAMES B. PRICE has been named vice president and general manager of Standco Canada Ltd., Toronto, Ont. Standco is a newly formed subsidiary of Standard Pressed Steel Co., Jenkintown, Pa.

N. T. Gates Co., Philadelphia, Pa., has named John T. Duffy to its sales staff.

Hinde & Dauch Paper Co., Sandusky, Ohio, has appointed David B. Orcutt, Jr., assistant sales manager for the Richmond, Va., sales district. Mr. Orcutt will assist J. M. Southall, district sales manager.

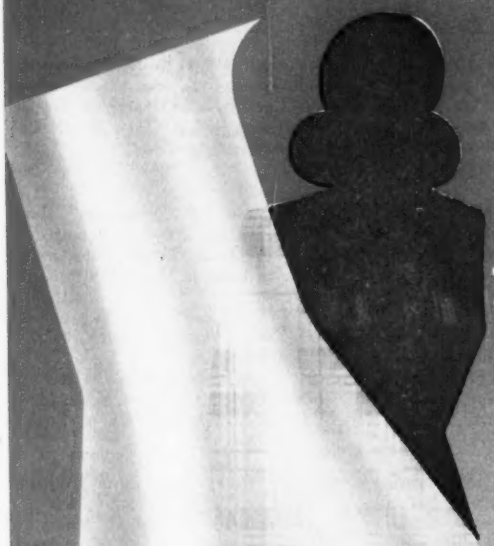
Howard Bros. Mfg. Co., Worcester, Mass., has elected Harry C. Cooley chairman of the board. He will continue as treasurer. Neal A. Mitchell has been elected president in addition to his duties as secretary. Other changes are: Arthur W. Englund, general manager;



METALLIZING ENGINEERING CO., INC., is constructing this 65,000-sq.-ft. plant at Westbury, L. I., N. Y. Completion is expected around the end of July.

Standard's quality products

for all fibers and fabrics



STANTEX* OILS FOR YARNS AND STAPLE — Suitable for all fibers in coning, winding, twisting, spinning, weaving, knitting, etc. Characterized by high lubricity, excellent stability and scourability and good anti-static properties.

PYROTEX — For scouring and dyeing Wool, Worsted, Cotton, Acetate, Rayon and Nylon. Neutral, effective under acid, alkaline and hard water conditions.

STANTEX* PENETRATORS — For fast, efficient wetting and surface reducing action in dyeing and finishing of all yarns and fabrics.

RETARDINE* — For level dyeing and stripping of vat, sulfur and direct colors.

MOYTOL — Penetrant for dyeing, fulling, carbonizing, mercerizing, finishing and sizing. Effective in acid, alkaline and salt solutions.

STANDYE-FIX — New Dye fixatives for improving fastness to light, washing, crocking and perspiration; can be applied after dyeing or in finishing treatment.

STANDAPOLS* — Quality sulfonated oils for finishing, softening, throwing, sizing and emulsifying; anti-static agents.

STANTEOSINE — Substantive softener for Acetate, Rayon, Cotton, Worsted, Wool. Minimum effect on shade and light fastness of dyed fabrics. Anti-static properties.

SANFOROLS — For efficient wetting and rewetting and softening properties in preshrinking processes. No gumming of shoes or odor development.

STANDAFINS* — Durable and semi-durable finishes imparting a full range of body, hand and drape to all fabrics; non-slip finishes; snag-resistant finish for hosiery; ribbon finish.

STANSET — Resin products that impart a durable, crease and shrink resistant finish. *Reg. U. S. Pat. Off.

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All wool or cotton back

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Cotton warp or linen warp
All standard widths and weights

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Manufactured to exacting standards for uniformity
Both cotton warp and linen warp
Part synthetic available

ROLLER CLOTH
Complete range of types, sizes, and weights
All wool or part cotton

OTHER SPECIALTY WOVEN FABRICS
Developed at your request

NOONE INDUSTRIAL FABRIC DIV. KENWOOD MILLS

Peterborough, New Hampshire

The oldest manufacturer of woven industrial fabrics in America

News About **SUPPLIERS** (Continued)

J. CLINT JOHNSTON has been appointed general manager and assistant to the president of Hayssen Mfg. Co., Sheyboygan, Wis.

JOHN G. FLEMING has been appointed to the newly created position of product-planning manager of The Bristol Co., Waterbury, Conn.

Henry H. McWay, superintendent; and Percy F. Rowley, director of purchases and advertising and supervisor of personnel.

Hunt Loom & Machine Works, Inc., Greenville, S. C., has elected Robert C. Brownlee treasurer and a director. He succeeds W. E. Henderson as treasurer.

Mars Engineering, Inc., Newark, N. J., has added a new division that will design industrial dust-collection and fume-elimination systems.

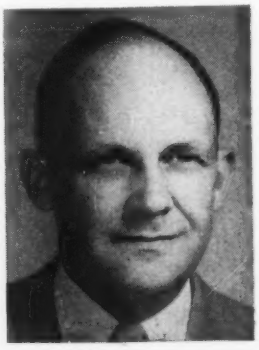
Mathews Conveyor Co., Ellwood City, Pa., has broken ground for a new office and engineering building and an addition of approximately 25,000 sq. ft. to the present manufacturing area. The new building will be a three-story brick structure 80x120 ft.

Orr & Sembower, Inc., Reading, Pa. has appointed J. Frederick Keeler sales representative to handle Powermaster packaged automatic boilers in the home office and factory area of central Pennsylvania.

William Powell Co. has appointed C. Barry Neill, Jr., a sales representative of Powell valves.

Robertshaw-Fulton Controls Co., Anaheim, Calif., has appointed Thomas H. Jeffers to the new position of assistant general manager of the Anaheim Div. Mr. Jeffers was also elected an assistant vice president. Robert O'Hara has been added to the staff of the Fielden Instrument Div., Detroit, Mich., as a sales engineer.

F. J. Stokes Machine Co., Philadelphia, Pa., has elected Alan A. Hutchings to the



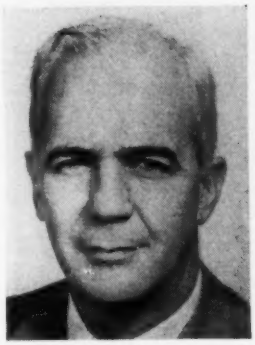
F. E. GLOTFELTY (left) and R. G. RUARK (right) have been elected vice presidents of Corn Products Refining Co., New York, N. Y. Mr. Glotfelty was also named to the board of directors.

News About **SUPPLIERS** (Continued)

newly created position of vice president in charge of sales. Harry D. Walp, Jr., has been transferred to the New England district office as senior sales engineer. Walter E. Rayher has been transferred to the New York office.

Stowe-Woodward, Inc., Newton Upper Falls, Mass., is building a new roll-covering plant at Griffin, Ga. The new plant will be devoted exclusively to the compounding and application of rubber roll coverings.

Wentworth Mfg. Co., Fall River, Mass., has elected George B. Moran, Joseph W. Ress, and Frederick S. Robinson to the board of directors.



DR. HERSCHEL H. CUDD has been appointed to the newly created position of manager of research and development at American Viscose Corp., Philadelphia, Pa.

Chemical & Yarn Suppliers

American Cyanamid Co., Organic Chemicals Div., Bound Brook, N. J., has appointed M. N. Gaboury plant manager and F. B. Manker assistant plant manager. Bancroft W. Henderson has been named director of sales. Dr. V. E. Wellman has been appointed manager of the Petrochemicals and the Intermediate & Rubber Chemicals Depts.

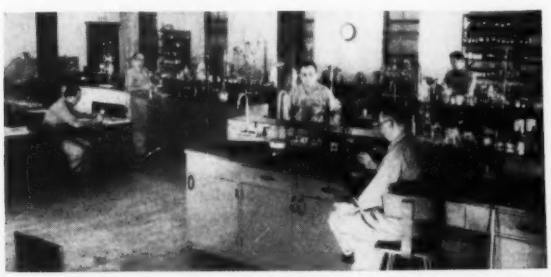
Atlas Powder Co., Wilmington, Del., has added James B. Weaver to the firm's planning department.

Buffalo Electro-Chemical Co., Inc., a division of Food Machinery & Chemical Corp., has appointed Vernon E. Moore California sales representative for Becco Sales Corp. Mr. Moore will make his headquarters in Los Angeles. He will also serve Nevada and Arizona.

Chemstrand Corp., Decatur, Ala., has appointed William R. Burks general traffic manager. He will be in charge of traffic activities at Decatur and Pensacola, Fla. S. Jack Davis has been appointed senior group leader in charge of the newly established Textile Research Section of the research department.

Dobeckmun Co., Cleveland, Ohio, has appointed Philip Nathanson to head the newly created research and development department headquarters of the Lurex division. Mr. Nathanson will make his headquarters in New York City.

Dow Corning Corp., Midland, Mich., has organized a Canadian subsidiary to be known as Dow Corning Silicones Ltd., Toronto, Ont. D. C. R. Miller is general manager. The executive offi-



HART PRODUCTS CORP., New York, N. Y., has completed the installation of new equipment in its new plant and laboratory in Jersey City, N. J. The total cost of the new equipment was $50,000.

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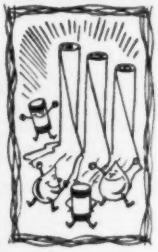

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Barada & Page, Inc., Houston, Dallas, Corpus Christi, New Orleans,
St. Louis, Wichita, Oklahoma City, Tulsa, Kansas City, Mo.
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Braun Corporation, Los Angeles, California

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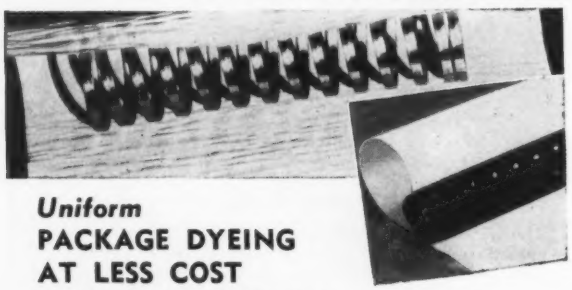

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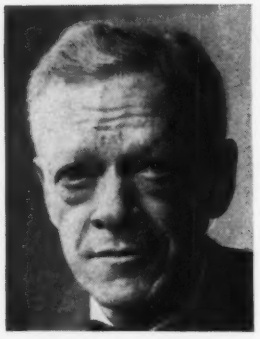
News About **SUPPLIERS** (Continued)

ALEXANDER J. McCARTHY has been elected secretary of National Adhesives Ltd., England, a subsidiary of National Starch Products, Inc., New York, N. Y.



BANCROFT W. HENDERSON has been appointed director of sales of the Organic Chemicals Div. of American Cyanamid Co., Bound Brook, N. J.

cers are: Dr. W. R. Collings, president; Dr. Shailer L. Bass, vice president; William C. Blackburn, secretary; and Burl D. Huber, treasurer.

Food Machinery & Chemical Corp., New York, N. Y., has appointed Alfred T. Loeffler vice president of the chemical divisions.

General Aniline & Film Corp. and **General Dyestuffs Corp.** have opened a new branch office, warehouse, and laboratory facilities in Chattanooga, Tenn. H. A. Webb has been appointed branch manager and W. R. Criminger has been made office manager.

General Electric Co., Chemical Div., Pittsfield, Mass., has named Frederic W. Hammesfahr manager. At the company's Silicone Products Dept., Waterford, N. Y., William S. Kather has been named supervisor of water-repellent silicone sales development and Milton C. Lauenstein has been appointed supervisor of rubber-fabricating-industry sales development.

Goodyear Tire & Rubber Co., Akron, Ohio, has appointed John Platner to the Chemical Div. Mr. Platner will provide technical service to the paint, paper, and textile industries throughout the country.

Imperial Chemical Industries Ltd., London, England, has granted a license to Algemene Kunstzijde Unie N. V., Velperweg 76, Arnhem, Holland, the Dutch manufacturers of rayon and nylon, under which the latter company will have the right to manufacture in The Netherlands and Belgium the British polyester fiber known as Terylene.

Keever Starch Co., Greenville, S. C., has promoted E. Hays Reynolds to assistant manager of the Textile Sales Div.

Koppers Co., Inc., Pittsburgh, Pa., has promoted W. J. Reagan to assistant plant manager in charge of production at the Kobuta plant at Monaca, Pa. He has been succeeded as personnel manager by Arden A. Cambre. Mr. Reagan succeeds Frank R. Garner, who was promoted to manager of the plant.

Pittsburgh Coke & Chemical Co. will undertake a long-range industrial development program on a 150-acre site at Spartanburg, S. C. Southern headquarters for the Fine Chemicals Div. will be established there.

Watson-Park Co., Ballardvale, Mass., has merged with Reichhold Chemicals, Inc., New York, N. Y. Watson-Park's Ballardville plant will be the headquarters of Reichhold's New England Div.

Wyandotte Chemicals Corp., Michigan Alkali Div., has appointed Lawrence J. Healy, Jr., a technical service representative. Mr. Healy will be concerned with helping to establish and maintain standards for product quality, packaging, labels, and shipping requirements.

NEWS ABOUT Mills

Cotton Mills

E. T. Barwick Mills, Chamblee, Ga., has purchased the Morrill Mfg. Co., Dalton, Ga.

Bell Textile Co., Dalton, Ga., has organized a new division under the name of Pride Rug Mills. This new division will manufacture large tufted-cotton rugs.

Burlington Mills Corp., has begun construction on a new addition to the Mays Mill, Cramerton, N. C. J. R. Barger & Co., Mooresville, N. C., is the contractor.

Clayton Carpet Co. has moved into its new plant at Spartanburg, S. C. At present 11 looms are in operation manufacturing carpets and throw rugs. An additional 21 looms will be put into production soon.

Cone Mills Corp., Greensboro, N. C., is having plans prepared by Lockwood Greene Engineers, Inc., Spartanburg, S. C., architect and engineer, for a proposed new mill at San Marcos, Tex. The estimated cost of the mill is $9,000,000.

Firestone Textiles, Gastonia, N. C., plans to increase its production during the next six months. Additional processing equipment will be moved to Gastonia as a result of the termination of a plant-lease agreement with American Viscose Corp., Roanoke, Va. A 12,500-sq. ft. addition is being constructed at Gastonia to accommodate the additional machinery.

Opp Cotton Mills, Opp, Ala., recently completed an addition to its weave room. The new building contains 25,000 sq. ft. of floor space. Air conditioning has been installed.

Springs Cotton Mills, Lancaster, S. C., is reported to have placed orders for new textile machinery and equipment estimated to cost $5,000,000. Machinery ordered includes: Super-Draft for the balance of the unconverted spinning frames, spoolers, warpers, wide-sheeting looms, bleaching and dyeing equipment, and air-conditioning equipment.

Thomaston Mills, Inc., Thomaston, Ga., is constructing a second large addition that will add 30,000 sq. ft. to the present floor space. A three-story addition, 60x40 ft., is under construction between Mill No. 1 and Mill No. 2. The contracts have been let to Frank Binford Construction Co., Thomaston.

Woolen and Worsted Mills

Albany Felt Co. of Canada Ltd., Cowansville, Que., plans to construct an addition to its plant on Westmount St.

Amedee Prouvost & Sons, a French concern, plans to construct a wool-combing mill in Columbia, S. C. The site of the new plant has not yet been announced. This company has subsidiaries located in Boston, Mass., and Woonsocket, R. I. The new plant will have a capacity of 20-million pounds of processed wool a year.

Blackwood, Morton & Sons (Canada) Ltd., St. Therese, Que., is constructing an addition to its carpet plant that will double the original floor space. The new $500,000 addition will be used for storage and shipping facilities.

Guelph Yarns Ltd., a division of Harding Carpets Ltd., Guelph, Ont., is erecting a one-story, 83x100-ft., concrete-block plant and warehouse addition. D. L. Pagani, Guelph, is the contractor. The cost is estimated at $27,000.

Kenwood Mills, and **Joseph Noone's Sons,** both divisions of F. C. Huyck & Sons, Peterborough, N. H., have a $200,000 improvement program underway. New equipment will be installed.

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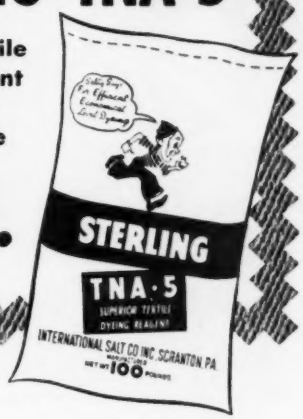

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O.K. Efficient, Economical Replacement, pound for pound, for anhydrous sodium sulphate in a neutral dye bath.

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News About MILLS (Continued)

Synthetics Mills

Goodman & Theise, Inc., Scranton, Pa., is moving its throwing equipment from the Scranton plant to its plant in Stafford Springs, Conn. Looms are being moved from the Taylor, Pa., plant to Scranton.

Lehigh Spinning Co., Allentown, Pa., has installed new equipment that will increase the mill's output of synthetic pile yarns for both tufted and woven soft-surface floor coverings. Four new twisters and a battery of special precision winders have been installed.

Rhode Island Spinning Co., Woonsocket, R. I., was chartered recently to manufacture cotton, wool, silk, rayon, and synthetics. The incorporators are Robert F. Pickard, Robert W. Shadd, K. Vera Chaddock.

Rochester Mill, East Rochester, N. H., plans to add 100 looms during 1954 to its current battery of 196.

Lazarus Rosenberg, Brooklyn, N. Y., is erecting a one-story yarn plant at 397-429 Butler St., Brooklyn. Lama, Proskauer & Prober, Brooklyn, is the architect.

Starr Mills, Inc., Anderson, S. C., is installing machinery at its new plant.

J. Weber Mfg. Corp., Dallas, Pa., has been organized by Jacques Weber, president of Bloomsburg Mills, Inc., Bloomsburg, Pa., to weave and sell industrial and decorative glass fabrics. Richard J. Lasko, formerly of Owens-Corning Fiberglas Corp., has been named vice president and general manager. Frank Hoffman is superintendent and Karl Graeflin, former technician with Owens-Corning, assistant superintendent. Limited production has been started at the Dallas, Pa., plant of Bloomsburg Mills. Executive and sales offices have been established at 2 E. 54th St., New York, N. Y.

Knitting Mills

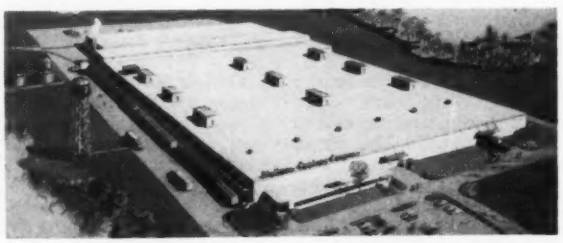
Allen Knitting Mills, Inc., Los Angeles, Calif., will manufacture Redmanized knit goods at its new 200,000 sq. ft. plant. Capacity is said to be 5,000,000 yds. per year.

Banks Knitting Co., Martinsville, Va., has begun operations at 16 Bridge St. H. Banks Pannill is the owner and operator.

Beau-Monde Hosiery Mills, Inc., Montreal, Que., is erecting a new building on St. Lawrence Blvd., Montreal. The cost is $35,000. Lousis & Aspier, Montreal, is the architect. General Services Construction Co., Montreal, is the general contractor.

Bernhard Altmann Texas Corp., San Antonio, Tex., has moved its New York stockroom to 143 W. 41st St. to provide for additional space. A chute has been installed to facilitate the transfer of goods. The new stockroom will be air conditioned.

Brown Century Corp., New



NICHOLS & CO., INC., Boston, Mass., is constructing a $3,000,000 basic wool-treatment plant in Johnsonville, S. C., to be known as Wellman Combing Co. The one-story plant will contain 150,000 sq. ft. of floor space. The new plant is expected to be ready for occupancy by July 1. Lockwood Greene Engineers, Inc., New York, N. Y., is the engineer. Daniel Construction Co., Greenville, S. C., is the contractor.

News About MILLS (Continued)

York, N. Y., has been formed and has purchased two operating subsidiaries of the Camp Corp., Brown Knitting Co., Warsaw, N. Y., and Century-Beverly Corp., Pottstown, Pa. Irving Flamberg is chairman of the new group. Albert Harthwait is president, and Dan Zodikoff is vice president.

Galax, Va.—Hurse Reed and Rom W. Hawks, formerly associated with Galax Knitting Co., have purchased 60 knitting machines formerly used at that mill and plan to operate a knitting mill on women's hosiery on Fries Rd.

Maurice Handler, Los Angeles, Calif., has established a 20,000-sq-ft. plant in Philadelphia, Pa., under the name of Maurice Handler, Inc., for the manufacture of sweaters.

Ben Krieger & Co., Valdese, N. C., has begun an expansion program at its knitting mill. Additional machinery is being installed.

J. W. Laudenberger & Co., Inc., Philadelphia, Pa., has doubled its production capacity of footlets with the installation of new machines, handling equipment, and a streamlined layout.

Lincoln Hosiery Ltd., St. Catherines, Ont., has installed one Reading R-100 30-section machine and is now making 66-gauge 12-den. full-fashioned hosiery. Current plans call for replacing three 45-gauge machines with higher-gauge equipment before the end of 1954.

Mojud Hosiery Co., New York, N. Y., has opened an office and warehouse in Dallas, Tex. Albert Shinkman, formerly manager of the Los Angeles branch, will be in charge of operations.

Overbrook Hosiery Co., York, Pa., is moving 120 machines to the building in Newton, N. C., that was recently purchased from Whisnant Hosiery Mills, Hickory, N. C. Operations will begin as soon as machinery has been installed. Men's hosiery manufactured at Newton will be finished at the York, Pa., plant.

Phoenix Hosiery Co., Milwaukee, Wis., has acquired a subsidiary in Virginia to manufacture women's 60-gauge full-fashioned hosiery.

Prestige, Inc., New York, N. Y., has sold its nylon-tricot plant at Tamaqua, Pa., to Hakco Corp. Its Ephrata, Pa., hosiery plant may be operated on unbranded goods by Se-Ling Hosiery Mills, a Prestige subsidiary.

Queen Knit Goods, Inc., Charlotte, N. C., has purchased 10 new knitting machines and is increasing production.

Sheer Hosiery Mills Ltd., Sussex, N. B., is installing two 75-gauge full-fashioned machines built by Robert Reiner, Inc. The plant is now operating 16 66-gauge Reiner machines and 12 51-gauge 30-section Reading machines.

Somerset Knitting Mills, Philadelphia, Pa.—Half interest in this firm has been purchased by Gideon A. Frankil, president of Crown Prince Knitting Mills, from Manny Haber, who has retired. Mr. Frankil has been elected president of Somerset.

Vanette Hosiery Mills, Dallas, Tex., is converting its entire finishing operation to the Dunn System.

Vanta Corp., Montezuma, Ga., plans an expansion program at its plant to double the present knitting capacity.

Dyeing and Finishing Plants

Asheboro Finishing Plant, a unit of Burlington Mills Men's Hosiery Div., Greensboro, N. C., recently opened, is nearing full production. This new plant contains 150,000 sq. ft. of floor space.

Hans C. Bick, Inc., Reading, Pa., will spend about $100,000 for new equipment to dye and finish full-fashioned sweaters. The firm has bought 12 preboarding machines from Turbo Machine Co. that are designed to handle these sweaters.

Dye Masters, Inc., Inglewood, Calif., recently completed an expansion program. A complete new department has been set up for the dyeing of piece goods and garments in all synthetic fibers. New equip-

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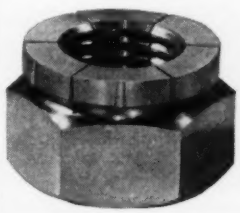

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News About MILLS (Continued)

ment includes stainless-steel paddle machines and tumbler drying machines.

Kendall Mills, Newberry, S. C., has purchased property at Bethune, S. C., that will be used as a future site for a new finishing plant. No construction plans have been announced as yet, as was reported last month.

Imperial Cloth Co., Listowel, Ont., is installing new dyeing and finishing equipment. Herbert Parkinson heads the dyeing and finishing division.

Northern Dyeing Corp., Washington, N. J.—Full control of this company has been acquired by F. J. Percarpio, who is also owner of Castle Creek Prints.

Nylor Knit Goods Dyeing Corp., Brooklyn, N. Y., has installed additional stainless-steel dyeing equipment.

J. Parker & Son, Trenton, Ont., has leased a portion of Renfrew Woolen Mills, Renfrew, Ont., for the establishment of a custom dyeing and finishing plant. A new concern, known as Ottawa Valley Dyeing & Finishing Co., is to be formed and operations will commence shortly. J. Parker will head this firm.

Riverdale Dye Works, Yonkers, N. Y., has purchased Monarch Piece Dye Works, Inc., Union City, N. J. The company will operated under the name Riverdale-Monarch Dye Works, Inc., Union City, N. J.

Miscellaneous Mills

Beechik Production, Inc., St. Paul, Minn., has purchased Va-Do Fabrics, Inc., Centre, Ala. Eight new tape looms will be added.

Geltman Sponging Co., Woonsocket, R. I., has been purchased by Mack Kahn, president of Kanmak Textiles, Inc., New York, N. Y.

Piedmont Label Co., Bedford, Va., has installed a new press for the printing of textile labels.

Schneck-Spink Co., has moved into newly renovated quarters at 610 Montgomery Ave., Narberth, Pa., and changed its name to Schneck Textile Fiber Co.

Foreign Mills

Barquisimento, Venezuela—A cotton and wool textile plant is contemplated to be built here by two Italian businessmen, Emilio Capucci and Isidorio Giovanni. Machinery costing some $33,000 has been purchased.

Ministry of Development, Baghdad, Iraq, is planning to establish a carpet plant to use locally grown wool. An Indian consultant has been employed for this project as well as for studying plans to build a cotton mill.

NEWS ABOUT *Men*

Julius W. Abernethy, chairman of the board, has been elected president of Mooresville Mills, Inc., Mooresville, N. C. Mr. Abernethy succeeds **John F. Matheson,** resigned. **W. W. Rader** has been elected executive vice president and treasurer. He succeeds **G. G. Matheson,** who resigned as vice president. **W. J. Fullerton** has been elected general merchandise and sales manager. **Ralph Tanner** and **H. C. Cobb** have also resigned as vice presidents.

Charles J. Alexander was recently named executive vice

News About **MEN** (Continued)

president of Crown Woolen Mills, Marcellus, N. Y.

Oliver P. Beckwith, formerly director of quality control and chief of the product-engineering laboratories of Alexander Smith & Sons Carpet Co., Yonkers, N. Y., has joined Fabric Research Laboratories, Inc., Boston, Mass., to head a newly created quality-control group.

John F. Beecher has been named chairman of the board and **Thomas R. Beecher** has been named president of Globe Woven Belting Co., Inc., Buffalo, N. Y.

Mathew F. Birnbaum has been elected president of Native Laces & Textiles, Inc., Hightstown, N. J. He succeeds his father, **Leon Birnbaum,** who is now chairman of the board and chief executive officer.

Claude Blackwell has been promoted to assistant superintendent of the seamless plant of Melrose Hosiery Mills, High Point, N. C.

Carl A. Boggs, general manager of three mills in the Fabric Production Div. of United Merchants & Manufacturers, Inc., has been placed in charge of a fourth mill, Old Fort Knitting Mills, Old Fort, N. C. **Harry H. Cosgrove, Jr.,** is manager of the Old Fort Knitting Mill.

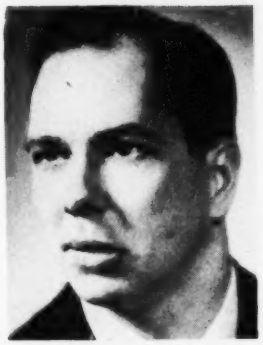
L. C. Bonnycastle has been appointed president of Canadian Cottons Ltd., Montreal, Que., succeeding **J. Irving Ray,** resigned. **MacMillan Boyd,** vice president, has also resigned.

William H. Borden has been named to the board of Borden Mills, Inc., Kingsport, Tenn. Mr. Borden is assistant treasurer of the company.

Frank B. Bradley has been named president of Wade Mfg. Co., Wadesboro, N. C.

Armand Brandao has joined the supervisory staff of Wamesit Processing Co., Wamesit, Mass.

Thomas Britt and **W. T. Franklin** have been promoted to second hands at the Milstead Plant of Callaway Mills, LaGrange, Ga.



FRANK T. SHIVERICK has been appointed manager of the Women's Knit Div., William Carter Co., Needham Heights, Mass.

William A. Broadfoot has been elected president of U. S. Finishing Co., Norwich, Conn., succeeding **D. B. Derby,** resigned. Mr. Derby will continue as a consultant. Mr. Broadfoot is also president of Aspinook Corp., Jewett City, Conn.

Coleman Burke has been appointed a director of Norwich Mills, Inc., Norwich, N. Y.

Leland Burns has been promoted to assistant superintendent of weaving at the No. 3 plant of Republic Cotton Mills, Great Falls, S. C.

William M. Butler has been promoted from comptroller to vice president of Chatham Mfg. Co., Elkin, N. C. **John L. Morehead** has been named to the board.

H. D. Carpenter has resigned as superintendent of Imperial Cotton Mills, Eatonton, Ga., to accept the position of professor of yarn manufacturing at the Auburn School of Textile Technology.

John Clark has been named overseer of spinning at Basin Mills, Inc., Orono, Me.

Eugene P. Cofield will retire as vice president of Erlanger Mills, Inc., Lexington, N. C., at the end of August.

Wade Costello has resigned as overseer of finishing at Kenwood Mills, Inc., Cavendish, Vt.

Walter S. Cowan has been

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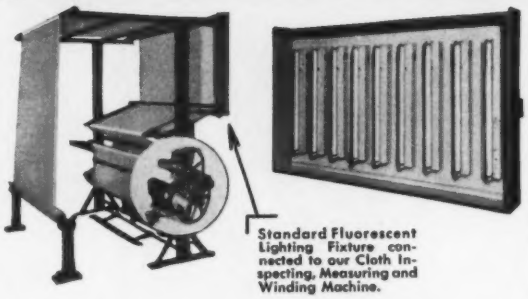

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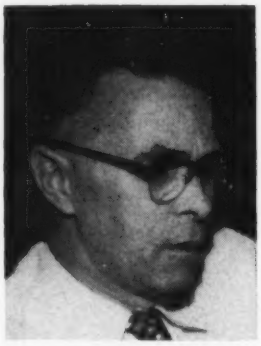
News About **MEN** (Continued)



NOYCE PADGETT has been promoted to overseer of weaving at Calhoun Mills, Calhoun Falls, S. C. He was formerly loomfixer instructor.

named to head the worsted-spinning division of Harding Carpets Ltd., Brantford, Ont.

C. H. Crews has been named manager of Starr Mills, Inc., Starr, S. C.

Willie Crim has been promoted to overseer of weaving at the Granby Plant of Pacific Mills, Columbia, S. C. **Joseph A. Birchmore** has been promoted to second hand in charge of weaving.

H. W. Croy has been named superintendent of the weave room at Pepperton Cotton Mills, Jackson, Ga., succeeding **W. C. Broom,** who has retired.

Albert Dannenbaum has been named president of Schwarzwaelder Co., Philadelphia, Pa., succeeding the late **Frederic Lee Hess.** He will also continue as treasurer. **Charles Kiesling** will continue as vice president and general manager.

Edward Dath has been named yarn superintendent for Goodall-Sanford, Inc., Sanford, Me.

G. Edward Dickard, personnel director at Calhoun Mills, Calhoun Falls, S. C., has been transferred to the F. W. Poe Mfg. Co., Greenville, S. C., as personnel director. **Woodrow Outz** has been made second hand in the carding department; **William Bigham** has resigned as overseer of weaving and is now overseer of weaving in one of the Kendall Mills plants in Newberry, S. C.; **Dewey Quinn** has been promoted to head of quality control at the mill.

Horace S. Doan has been named general superintendent of the finishing division of American & Efird Mills, Mount Holly, N. C. **Al Roy** has been made superintendent of the dye plant; **Robert Henderson,** superintendent of the thread finishing plant; **Eugene Mizher,** production manager; **James Cole,** superintendent of maintenance.

Harold A. Fahr, vice president and general manager of Bernhard Altmann Corp., New York, N. Y., has been placed in charge of the firm's High Rock Mills, Philmont, N. Y.

Roy A. Faries has been appointed overseer of carding at Clover Spinning Mills, Clover, S. C.

Melvin J. Feins, manager of Laurens Hosiery Co., Inc., Laurens, S. C., has been promoted to general manager of M. K. M. Knitting Mills, Inc., Manchester, N. H., the parent company of Laurens. Mr. Feins has been succeeded at Laurens by **Troy W. Myers.**

G. M. Ferree has retired as superintendent of the throwing plant of Adams-Millis Corp., Tryon, N. C. He has been succeeded by **Craig Hancock.**

Oswald A. Fitzpatrick has been promoted to assistant vice president of Hayward-Schuster Woolen Mills, East Douglas, Mass. **Robert Lampher** has been named overseer of spinning. **John Klisiewicz** has resigned as designer and is now with Goodall-Sanford Mills, Sanford, Me.

John Flowe has been named assistant superintendent at the Newton, N. C., plant of Burlington Mills, to succeed **Dick Wilkins,** who has been transferred to the Burlington offices in Greensboro.

Clifford Fox has returned to the Kanmak Mills, Inc., plant at Kulpmont, Pa., as general manager.

William T. Galey, III, has been named to the newly created position of vice president in charge of production and procurement of raw materials

News About **MEN** (Continued)

DENSEL L. DOCKERY has been promoted to personnel director at Calhoun Mills, Calhoun, S. C. He was formerly head of quality control.

for Aberfoyle Mfg. Co., Chester, Pa. He takes over most of the duties of **Lawrence A. Stead,** who has resigned as general manager and chief chemist.

Herbert C. Gates has been named superintendent of the Monarch Knitting Co. Ltd., plant at Dunnville, Ont.

John T. Gibbons has been named president of Absorbent Cotton Co., Valley Park, Mo.

William Gregory has been named dyer at Capital City Woolen Mills, Inc., Des Moines, Iowa. **Gilbert Hamilton** has been named to succeed Mr. Gregory as overseer of dyeing at Seymour Woolen Mill, Seymour, Ind.

Charles Haeussler has been elected a vice president of Reamstown Hosiery Mills, Inc., Mohnton, Pa.

P. Huber Hanes, Jr., has been elected president of P. H. Hanes Knitting Co., Winston Salem, N. C. He succeeds his father, **P. H. Hanes, Sr.,** who will continue as chairman of the board. **John W. Hanes, E. A. Morris,** and **R. F. Brooks** have been elected to the board. **Philip B. Whiting** has been named controller.

Ray A. Hartman has been elected senior vice president of Munsingwear, Inc., Minneapolis, Minn. **Donald C. McLeod** is now vice president of the men's and boys' division. **Homer E. Jones** is vice president in charge of the women's and girls' division. **Thomas W. Hillyard** will head the hosiery division.

Malcolm G. Jones, E. B. Shaw, C. E. Bowne, Harry Horrocks, and **Robert O. Huffman** have been named to the board of American Thread Co., New York, N. Y.

Paul A. Kalbach has been named assistant to the president of Laurel Hosiery Mills, Reading, Pa.

George M. Kloster has been appointed production manager for Norwich Knitting Co., Clayton Div., Clayton, N. C.

B. Joseph Kmon has been elected vice president of Ware Knitters, Inc., Ware, Mass.

James Leigh has been named superintendent of dyeing at the Waldrich Co., Delawanna, N. J.

Leo Lenney has been named superintendent of Stunzi Sons Silk Co., Inc., Ephrata, Pa.

J. Earl Lollis has been promoted from overseer of weaving to superintendent of weaving at the Dunean Mill Div. of J. P. Stevens & Co., Inc., Greenville, S. C.

F. H. Ludington, Jr., has been elected vice president of Chase Bag Co., Chicago, Ill. **William N. Brock** has been elected vice president and general sales manager; **A. H. Nuhn** has been elected vice president; **M. J. Bender** has been elected secretary.

J. Malloy has been named assistant superintendent of Peerless Textiles, Inc., a division of Burlington Mills Corp., Cleveland, Tenn. **R. B. English** has resigned as overseer of dyeing at Peerless.

W. H. McDonald has been named vice president and treasurer of Southern Mercerizing Co., Inc., Tryon, N. C. He succeeds the late **William C. Ward. James B. Pruitt** has been named secretary and a director, and **Jack Lane** has been named superintendent.

Frank McHugh has been named overseer of weaving at Massachusetts Mohair Plush Co., Inc., Lowell, Mass.

George M. Miller has been elected to the board of Arcade

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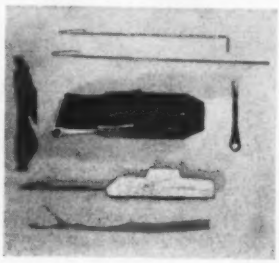

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News About **MEN** (Continued)

Cotton Mills, Rock Hill, S. C. Mr. Miller is chairman of the board of Turner Halsey Co.

Walter J. Mooney has been elected president of Ballston-Stillwater Knitting Co., Ballston Spa, N. Y., succeeding **James M. Beverley**, who continues as secretary and a director. **Richard J. Currie** was re-elected vice president; **Arthur Harbrecht**, treasurer; **Walter J. Mooney, Jr.**, as director.

Robert M. Pulley has been appointed superintendent of Clover Mills, Clover, S. C., and **William L. Rankin, Jr.**, assistant superintendent. **Fred T. Broyhill** has been appointed superintendent of the Troutman Mill, Troutman, N. C. Both mills are units of American Thread Co.

Max Redding has been named superintendent of the spinning plants of Groves Thread Co., Gastonia, N. C. He succeeds **R. Fred Long**, who has resigned and is now superintendent of Toler, Hart & Holt Mills, Inc., Fayetteville.

Conway L. Still, formerly manager of Springs Cotton Mills, Chester, S. C., has been named vice president of Hunt Loom & Machine Works, Inc., Greenville, S. C., and not president as was previously reported.

D. H. Tyson has been elected treasurer of Botany Mills, Inc., Passaic, N. J.

OBITUARY

William E. Allen, 85, vice president of Gaede Dyeing Co., Inc., Paterson, N. J.

Frank L. Arundel, retired foreman at Hope Webbing Co., Pawtucket, R. I.

James E. Bryan, 69, president and treasurer of Undine Twine Mills, Moodus, Conn.

Edgar Lewis Cantrell, 57, superintendent of Riverdale Mills, Enoree, S. C.

E. Harold Cluett, 79, former chairman of the board of Cluett, Peabody & Co., Troy, N. Y.

Erwin Goldreich, 63, president of Wings Knitting Co., Milwaukee, Wis.

Lewis A. Hird, 65, treasurer of Samuel Hird & Sons, Garfield, N. J.

Charles B. Johnson, 77, president of Charles B. Johnson Machine Works, Paterson, N. J.

Ralph E. Knup, 53, general manager of J. B. Martin Co., Norwich, Conn.

Thomas E. McCaffrey, 56, superintendent at Bates & Innes Woolen Mills Ltd., Carleton Place, Ont.

William Bruce McNeely, 75, former overseer of the spinning room at Mooresville Mills, Mooresville, N. C.

J. Marion Norris, 64, superintendent of the mechanical department of A. M. Smyre Mfg. Co., Gastonia, N. C.

Palmer H. Oswald, 65, president of the East Penn Weaving Co., Topton, Pa.

William R. Owens, 62, overseer of Plant No. 3 card room of China Grove Cotton Mills, China Grove, N. C.

W. L. Pitcher, 82, president of United Elastic Corp., Easthampton, Mass.

Bernard Rosenfeldt, 53, assistant superintendent of Burton Knitwear Co., Philadelphia, Pa.

Willis H. Slane, 67, founder and owner of Slane Hosiery Mills, High Point, N. C.

William C. Ward, 69, vice president and treasurer of Southern Mercerizing Co., Tryon, N. C.

Philip Westbrook, 79, president of Dana Warp Mills, Westbrook, Me.

Mrs. Rosa Willingham, 66, former president of the Indera Mills, Winston-Salem, N. C.

Jacques P. Wolf, 80, founder and president of Jacques Wolf & Co., Passaic, N. J.

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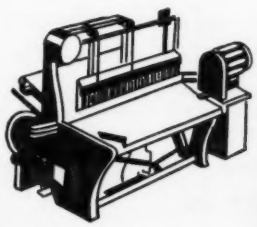

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1—Verduin Hydraulic Padder 60" wide, 2 rolls.
6—Hinnekens Vari-Speed Inspection Tables, 60" wide.
11—Stainless Steel Dye Boxes, open top, 8', 12', 14', 15' and 16' wide.
4—Hi-Speed Tubers—54"—66" wide.
1—Van Vlaanderen Semi-Decater 50" w/pumps and blanket.
1—Van Vlaanderen Calender 60", 3 rolls, ball bearing, lever weight.
4—Carrier Atmosphere Diffuser, Heating and Conditioning Units.
1—Economy Baler 29"x14", manual, blanket size.
2—Clark Fork Lift Trucks, gasoline, 12' lift, indoor and outdoor.
1—Worthington Air Conditioning and Heating Unit, 3 HP.
1—Windle Doubling and Measuring Machine 80" wide.
1—Van Vlaanderen Pneumatic Embossing Calender 54" wide, 7 ton.
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2—Cloth Inspecting Machines
549—SS. Loom Reeds, 30-60 dent, 44" of dents
1526—Harness frames, 12 x 45" & heddles, ¼" eye
1,000,000—Dropwires, ⅝" x .008", hand draw, sl. bar
175—Fluorescent Lights, 2 tube, 48"
220 sp.—290 Filling Winders, Disc. Tension
45,000—7⅞" #5 Butt Filling Bobbins
780—Cloth Tubes for Finished Cloth
500—Cloth Shipping Cartons, 21 x 43 x 26" deep

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TERRELL BOBBIN STRIPPER

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TITAN WARP-KNOTTER, 1951
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(Continued from preceding page)

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☐ **Check contents** and locations of first-aid kits. Be sure they're adequate and up to date. Here, again, your CD Director can help. He'll advise you on supplies needed for injuries due to blast, radiation, etc.

☐ **Encourage personnel** to attend Red Cross First-Aid Training Courses. They may save your life.

☐ **Encourage your staff** and your community to have their homes prepared. Run ads in your plant paper, in local newspapers, over TV and radio, on bulletin boards. Your CD Director can show you ads and official CD films or literature that you can sponsor locally. Set the standard of preparedness in your plant city. There's no better way of building prestige and good community relations—and no greater way of helping America.

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HOW TO USE. First, look in the table below and find the letter that designates the class of supply or service in which you are currently interested. Then consult in the index the page numbers that are followed by that letter.

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B. Building Construction and Maintenance, Paints, Yard Equipment, Water Supply
C. Chemicals and Dyestuffs
D. Cleaning Equipment
E. Dyeing, Finishing, and Cloth Room Equipment and Supplies
F. Electrical Equipment—Motors, Controls, Lighting, Etc.
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O. Materials and components for Machinery and Equipment
P. Materials Handling, Packaging, and Shipping Facilities
Q. Power Generation and Transmission (see also Electrical Equipment)
R. Weaving and Warp Preparation Equipment and Supplies
T. Yarn-Production, Twisting and Winding Equipment and Supplies

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Bemis Bro. Bag Co.	284	P
Bendix Aviation Corp., Eclipse Machine Div.	306	T
Berks Needle Straightening Co.	352	L
Bersworth Chemical Co.	343	C
Bijur Lubricating Corp.	308	M
Binney & Smith, Inc.	351	F L R
Birch Bros. Inc.	352	F
Boger & Crawford	287	G
Booth Co., Benjamin	241	T
Borne, Scrymser Co.	104	C
Bristol Co., The	30	K
Brush Electronics Co.	314	K
Bunting Brass & Bronze Co.	256	O Q
Butterworth & Sons Co., H. W.	205	E
Caldwell Co., Inc., W. E.	301	B F
Carbic Color & Chemical Co., Inc.	293	C
Carpenter Steel Co., Alloy Tube Div.	44	H O
Carter Traveler Co., Div. of Carter, Inc., A. B.	228	RT

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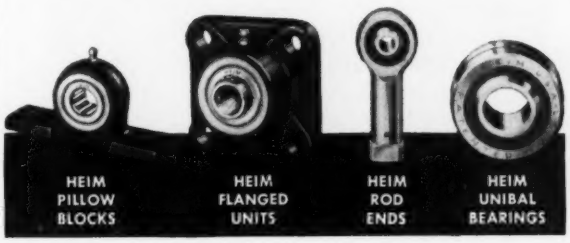

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Clark Equipment Co.,		
Industrial Truck Div.	63	P
Clipper Belt Lacer Co.	297	Q
Cocker Mach. & Fdry. Co.	236	R
Cole Mfg. Co., R. D.	316	B E
Colgate-Palmolive Co.	10	C
Collins Brothers Machine Co.	123	T
Colson Corp.	318	P
Corn Products Refining Co.	210	C
Courtaulds, Inc.	204D	G
Crane Co.	54	H
Crane Mfg. Co.	331	I
Crompton & Knowles Loom Wks.	155	R
Crown Engineering & Sales Co.	348	K
Crucible Steel Co.	6	O
Curlator Corp.	185	T
Curtis & Marble Machine Co.	316	T
Cutler-Hammer, Inc.	245	F
Cyclone Fence Dept., American Steel & Wire Div., U. S. Steel Corp.	307	B
Dary Ring Traveler Co.	336	T
Davis & Furber Machine Co.	157	T
Dayton Rubber Co., The	32-33	RT
Deutscher, Spinnereimaschinenbau, Ingolstadt	41	T
Diehl Mfg. Co.	169	F Q
Dietert Co., Harry W.	331	K
Dixie Leather Corp.	282	R
Dodenhoff Co., Inc, W. D.	226	T
Dodge Mfg. Corp.	20-21	Q
Dolge Co., C. B.	330	B
Draper Corporation	1, 138	R
Dronsfield Brothers Ltd.	121	T
duPont de Nemours & Co., E. I., Dyestuffs Div.	225	C
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Durant Mfg. Co.	296	K
Edda International Corp.	208	R
Eisenberg Fibers, Inc.	350	G
Electro Dynamic Div. of General Dynamics Corp.	271	F
Emerson Apparatus Co.	328	K
Emery Industries, Inc.	279	C
Fafnir Bearing Co.	213	O Q
Felters Co., The	278	L RT
Fidelity Machine Co., Inc.	14	L T
First National Bank of Atlanta	291	N
Fletcher Works	222	T
Foster Machine Co.	176-177	T
Foxboro Co., The	202	K
Frankl Associates	212, 283, 318	F RT
Franklin Process Co.	135	G
Fuller Brush Co.	182	T
Gardner-Denver Co.	273	H
Gaylord Container Corp.	58	P
Geigy Chemical Corp., Dyestuffs Div.	2	C
Gemar Associates	351	N
General Chemical Div., Allied Chem. & Dye Corp.	337	C
General Dyestuff Corp.	55	C
General Dynamics Corp. Electro Dynamic Div.	271	F
General Electric Co.	232-233	F
General Plastics Corp.	264	C
Gessner Co., David	244	F
Glasco Equipment Corp.	280	F
Globe Dye Works	294	G
Goodrich Chemical Co., B. F.	12	C
Graphite Metallizing Corp.	322	O Q
Graton & Knight Co.	282	QR
Gubelin International Corp.	214	T
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Hayssen Mfg. Co.	290	P
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Heim Co., The	361	R
Heineman Corp. Co., Div. of Aetna Industrial Corp.	342	G
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Hermas Machine Co.	325	E T
Herr Mfg. Co., Inc.	221	P
Hinde & Dauch	286	E
Hinnekens Machine Co., Inc.	333	T
Holdsworth Gill Screw Co., Inc.	161	O
Holo-Krome Screw Corp.	328	T
Howard Bros. Mfg. Co.	179	R
Hubbard Spool Co.	250	R
Hunt Loom & Machine Works, Inc.	234	
Hunt Machine Co., Rodney Industrial Roll Div.	328	E
Textile Machinery Div.	203	E
Hunter Machine Co., James	180	E
Huyck & Sons, F. C.	342	E
Hyatt Bearings Div., General Motors Corp.	143	O Q
Industrial Dryer Corp., The	172	T
Industrie-Werke-Karlsruhe	362	E

Ingersoll-Rand Co.	19	H
Ingolstadt	41	T
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Jenkins Bros.	275	H
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Jiffy Textile Marker Co.	349	E L R
Johnson Machine Wks., Chas. B.	274	R
Keever Starch Co.	100	C
Kenwood Mills, Noone Industrial Fabrics Div.	342	E
Kessler Trucking Co.	326	N
Kidde & Co., Inc., Walter	261	RT
Kidde Mfg. Co., Inc.	267	L
Kuljian Corp., The	351	N
Laurel Soap Mfg. Co., Inc.	320	C
Lawlor Co., S. C.	332	D
Lazenby Co., F. A., The	326	T
Link-Belt Co.	7	Q
Livermore Corp., H. F.	269	R
Loper Co., Ralph E.	348	N
Louden Machinery Co., The	66	D P
Lowell Shuttle Co.	288	T
Main, Inc., Chas. T.	352	N
Manhattan Rubber Div.	28	E
Manheim Mfg. & Belting Co.	61	Q
Manton-Gaulin Mfg. Co., Inc.	254	R
Marquette Metal Prod. Co.	209	T
Mawaco Machine Co.	350	E
McBride Co., Ed. J.	224	R
McGraw-Hill Book Co.	330	N
McKiernan-Terry Corp.	251	E
Medley Mfg. Co.	16	T
Mellor, Bromley & Co., Ltd.	292	L
Merrow Machine Co.	276	E
Micro Switch Div.	259	F
Milton Machine Wks., Inc.	322	R
Minneapolis-Honeywell Reg. Co. Industrial Div.	238-239	K
Micro Switch Div.	259	F
Monforts, A.	262	E
Monsanto Chemical Co. Textile Chemicals Div.	22-23	C
Mount Hope Machinery Co.	207	E
Muller, Franz	49	E
Muller, Jakob	283	R
National Aniline Div., Allied Chem. & Dye Corp.	17	C
National Ring Traveler Co.	240	T
National Starch Products	249	C
Naugatuck Chemical Div., U. S. Rubber Co.	285	C
New Departure Div. of General Motors	151	O Q
N. Y. & N. J. Lubricant Co.	184	M
Nopco Chemical Co.	31	C
Oakite Products, Inc.	159	C
Onyx Oil & Chemical Co.	68-69	C
Oronite Chemical Co.	46	C
Orr & Sembower, Inc.	42-43	Q
Pabst Brewing Co.	340	C
Package Machinery Co.	145	P
Parks-Cramer Co.	188-189	A D
Parks & Woolson Machine Co.	321	E
Penick & Ford, Ltd.	252	C
Perfecting Service Co.	320	H
Perkins & Son, Inc., B. F.	218	E
Philadelphia Quartz Co.	326	C
Pittsburgh Coke & Chem. Co.	289	C
Pittsburgh Corning Corp.	67	B
Platecoil Div., Tranter Mfg., inc.	235	E L
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Platt Freres S.A.R.L.	300	T
Platt Ltd., J. W. & H.	300	T
Pneumafil Corp.	211	T
Proctor & Schwartz, Inc.	268	E
Raybestos-Manhattan, Inc., Manhattan Rubber Div.	28	E
Reeves Pulley Co.	302	Q
Reiner Inc., Robert	204-204A	L
Rhoads & Sons, J. E.	5	QR
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Ryerson & Son Inc., J. T.	98	O
Saco-Lowell Shops	168	T
Sandoz Chemical Wks.	45	C
Sant' Andrea Officiana Meccanica	212	T
Sargent's Sons Corp., C. G.	255	E
Scharer Textile Mach. Wks.	265	T
Schlafhorst & Co., W.	11	RT
Schramm, Inc.	315	H
Scott Testers, Inc.	121	K
Simco Co.	329	E L RT
Sinclair Refining Co.	57	M
SKF Industries, Inc.	198-199	O Q
Societe Alsacienne De Constructions Mecaniques	165	T
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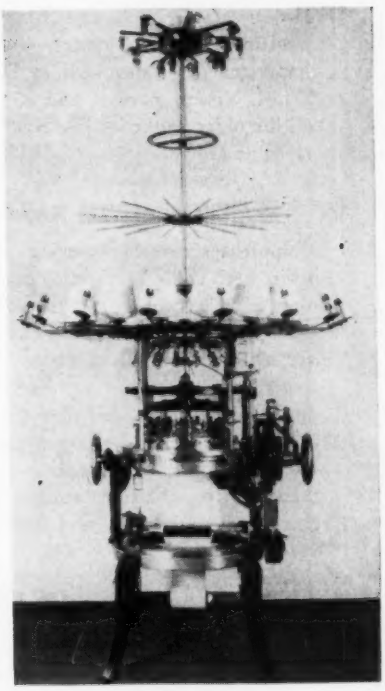

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Naugatuck Chemical Div	285	C
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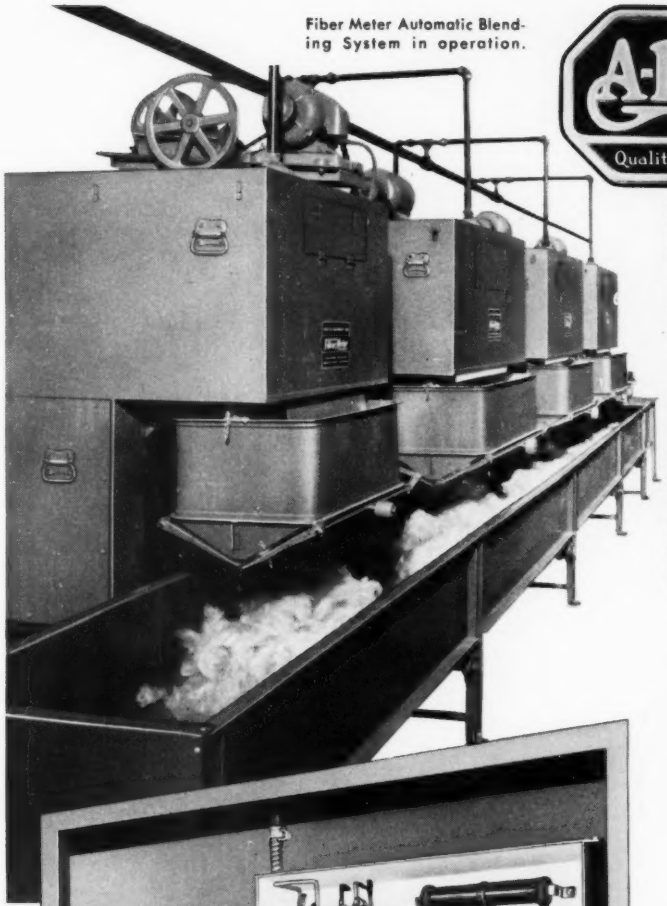
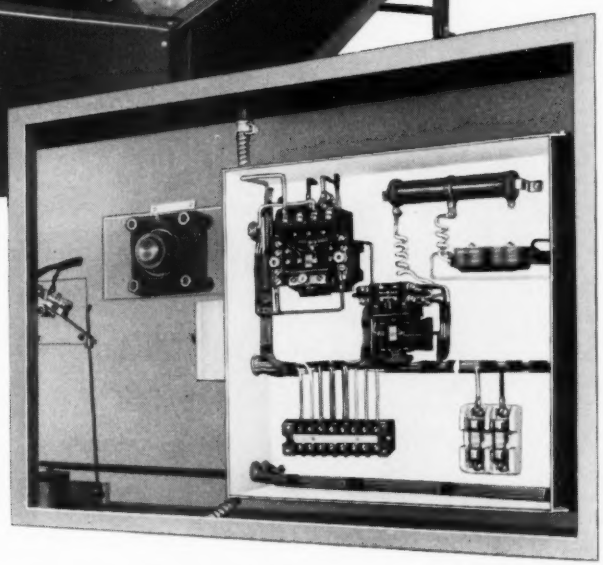
Fiber Meter Automatic Blending System in operation.





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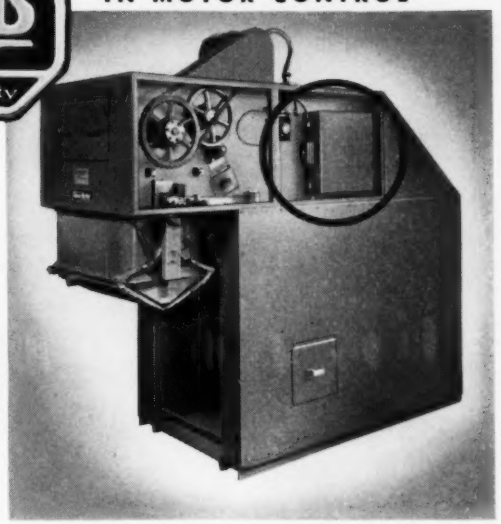

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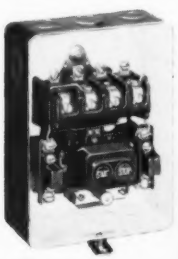

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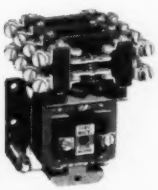

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